

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA
2 FOR THE COUNTY OF LOS ANGELES
3
4
5
6 RICHARD BOEKEN,)
7 Plaintiff,)
8 vs.) NO. BC226593
9 PHILIP MORRIS, INCORPORATED, a)
corporation; INTERNATIONAL HOUSE OF)
10 PANCAKES, INCORPORATED, a corporation;)
DOES 1-100, inclusive,)
11)
Defendants.)
12)
13
14
15
16 DEPOSITION OF DEBORAH KEIKO HOSHIZAKI, Ph.D.,
17 taken on behalf of the Plaintiff, at 777 South
18 Figueroa Street, Suite 4400, Los Angeles,
19 California, commencing at 9:28 P.M., on Wednesday,
20 February 28, 2001, before DONNA J. RUDOLPH, CSR
21 NO. 9652, in and for the State of California.
22
23
24
25

2
1 APPEARANCES
2 For Plaintiff:
3 LAW OFFICES OF MICHAEL J. PIUZE

By: Marc Goldstein, Esq.
4 Michael J. Piuze, Esq.
11755 Wilshire Boulevard
5 Suite 1170
Los Angeles, California 90049
6 323-655-5353

7 For Defendants:
8 ARNOLD & PORTER
By: Maurice A. Leiter, Esq.

9 Angel Tang
Attorney at Law
10 John Carlson, Esq.
777 South Figueroa Street
11 Suite 4400
Los Angeles, California 90017
12 213-243-4101

13 Also Present:
14 Steven S. Michaels, Esq.

15
16
17
18
19
20
21
22
23
24

25

3

1 I N D E X

2 EXAMINATION

3 By Mr. Goldstein Page 5

4

5

6

7 EXHIBITS

8 PLAINTIFF'S DESCRIPTION PAGE

9 1 List of Documents Reviewed by

Dr. Deborah K. Hoshizaki 54

10

2 Curriculum Vitae 54

11

12

13

14

15 INFORMATION REQUESTED

16 (None.)

17

18

19

20

21 MARKED QUESTIONS

22 (None.)

23

24

25

4

1 LOS ANGELES, CALIFORNIA; WEDNESDAY, FEBRUARY 28, 2001

2 9:28 A.M.

3

4 DEBORAH KEIKO HOSHIZAKI, Ph.D.,

5 the Witness herein, being first duly

6 sworn, deposed and testified as follows:

7

8 EXAMINATION

9 BY MR. GOLDSTEIN:

10 Q Morning, Dr. Hoshizaki.

11 Could you state the -- your name for the

12 record, please?

13 A Deborah Keiko Hoshizaki, H-o-s-h-i-z-a-k-i.

14 Q I imagine you probably are familiar with the

15 deposition process?

16 A No, I'm not.

17 Q You're not. Oh, okay. Great.

18 Let me go through a few brief introductory

19 statements and explain for you my perception of what we're

20 doing today. And if you have any -- well, the -- the lady

21 that's seated to your left and my right is a court

22 reporter.

23 As you can see, she's taking down everything

24 that's said in the room by everybody that's here. At the

25 end of this deposition, she will assemble what's said in a

5

1 booklet form and will send that to you. You'll have an

2 opportunity to review it, make any changes to it and sign

3 it under penalty of perjury.

4 The oath that you took is the same oath that

5 you would take in a court of law in which you're swearing

6 to tell the truth. We don't want you to guess or speculate

7 in your answers, but if I, for some reason, should ask you

8 a question which you don't understand or is unintelligible,
9 doesn't make sense or is otherwise objectionable to your
10 attorneys, we can try it again.
11 Should you want to take a break at any time,
12 let me know, and the same thing, if you ever want to speak
13 with your counsel, feel free to do so at any time. Another
14 rule is that we have to answer audibly. That's a mistake
15 that I make and witnesses make all the time. And that nod
16 of the head, as you are doing to acknowledge that you
17 understand, isn't enough for the reporter.
18 She only takes down verbal communications, so
19 if that's all right, we could answer audibly, and -- oh,
20 last thing is that should you make any changes to your
21 testimony, it may be commented on at trial and it could be
22 embarrassing, but that's only with respect to if you say
23 the light was green and then you change your mind, that --
24 I mean red, I mean green, if it's a material issue. If
25 there's a typographical error or a word that appears on the
6
1 transcript, a misspelling, obviously, that's not the type
2 of thing we're concerned about today.
3 If -- you've never had your deposition taken
4 before?
5 A Correct.
6 Q Okay.
7 And have you ever testified in a case before?
8 A In a --
9 Q I'm sorry. Good point.
10 Have you ever testified in any capacity before
11 in a courtroom?
12 A In a case in which I was a victim of attempted
13 armed robbery.
14 Q Okay.
15 And how long ago was that?
16 A Oh, maybe six years ago.
17 Q Okay.
18 Other than that encounter, this is the first
19 time you're being asked to give testimony, huh?
20 A Correct.
21 Q Okay.
22 Before I ask for your opinions that you're
23 going to offer at trial, can you tell me when it was that
24 you were first contacted by any attorneys relative to the
25 proposed testimony you're going to give today?
7
1 A I believe that was in the fall of '98.
2 Q And who made the initial contact?
3 A It was Mr. Chris Green of Debevoise & Plimpton.
4 Q Okay.
5 And where are they located?
6 A I believe they're located in New York.
7 Q Okay.
8 And what was said and by whom during that
9 conversation?
10 A Mr. Green contacted me and asked me if -- it's
11 been such a long time ago, I can't -- I can't tell exactly
12 verbatim what happened, but was I aware of it -- of the
13 Council of Tobacco Research, the fact that they no longer
14 were in existence and how do I feel about that? Would I be
15 interested in providing my opinions about CTR?
16 Q And how was it that you came to prominence to
17 them, if you know? Did he tell you he saw an article or
18 heard about you somewhere?

19 MR. LEITER: I'm going to object to the form.
20 You can answer.
21 MR. GOLDSTEIN: Sure.
22 THE WITNESS: I don't know how he heard about me. I
23 can speculate about how he might have heard about me, but I
24 don't know for sure how.
25 / / / /
8
1 BY MR. GOLDSTEIN:
2 Q Okay.
3 If you have a reasonable idea, I don't want you
4 to just guess out of the blue, but what is your best
5 understanding as to how he may have come to call you?
6 A I had written a letter to Harmon, Macallister
7 indicating that -- that the allegations or the -- well, the
8 allegations in which CTR was not funding bona fide
9 research, those types of allegations I thought were wrong.
10 I had felt that CTR had always treated me very fairly.
11 They did not disrupt my work. They've always been
12 supportive, and I was sorry to hear that CTR was no longer
13 in existence and that I would be happy to state that to
14 whomever he felt that was appropriate.
15 Q Okay.
16 What is your understanding and -- forgive my
17 ignorance -- but the Council of Tobacco Research, when were
18 they first formed?
19 A They were first formed, I believe, in 1954 --
20 I'm using the term "CTR" to refer to both CTR and the
21 Tobacco Institute Research Council and the CTRU is a
22 "Lyndsitare," USA, Inc.
23 Q Okay.
24 A Okay.
25 Q But other than a change of name, they're
9
1 basically the same entity that's existed over time?
2 A Yes.
3 Q Okay.
4 Who funded the Council of Tobacco Research, if
5 you know, or CTR? I'll use your -- your initials. I'm
6 sorry.
7 A So CTR was funded by money from the tobacco
8 companies.
9 Q Okay.
10 And how did you know that, or how'd you come to
11 know that?
12 A From my readings.
13 Q Okay.
14 Do you know at what level it was funded
15 during -- I guess it went on for a very -- various periods
16 of time, but do you have an approximation when you were
17 involved, the level of financial participation a tobacco
18 companies with HCTR?
19 MR. LEITER: I'm going to object to the form.
20 Do you want to establish a time frame?
21 MR. GOLDSTEIN: At the time she was funded.
22 MR. LEITER: Did we establish when that was?
23 MR. GOLDSTEIN: Okay.
24 Fair enough.
25 Q When was it that you were funded by CTR?
10
1 A In the early 90's.
2 Q Okay.
3 Can you be more specific? Like, was it a

4 period of years?
5 A I was funded from '91 to '97.
6 Q Okay.
7 And do you have an understanding as to what
8 level it was funded at?
9 A At that time I -- I don't. I have an idea of
10 what the total funding was for the program, but I couldn't
11 tell you for the year '91 how much money was spent.
12 Q Okay.
13 When was it that you had your first experience
14 with CTR of any kind?
15 A When did I first hear about them?
16 Q Yeah.
17 A Okay. When I was an undergraduate at MIT.
18 Q And did you ever work for them -- I understand
19 you got a grant, but --
20 A No, I did not have a grant.
21 Q Oh, you didn't?
22 A No.
23 Q I'm sorry.
24 A My -- the woman I worked with Dr. Linda Hall
25 who was an assistant professor at MIT was being funded by
11
1 CTR, and I was an undergraduate in her lab, carrying out
2 research.
3 Q Okay.
4 So the observations that you expressed to --
5 was it Mr. Green? I wrote Chris Green down. Was it
6 Mr. Green?
7 A Yes.
8 Q -- were based on those which you acquired as an
9 assistant working for Dr. Hall --
10 A No, the -- no.
11 Q I'm sorry. Okay. We'll -- we'll cover it. I
12 don't mean to go into minor specifics here, but why don't
13 we first -- why don't you first tell me what your
14 understanding is as to the opinions that you might be asked
15 to express at trial of this matter.
16 A Well, I -- I have developed a set of opinions
17 about CTR and CTR activities, based on my readings, based
18 on my special experience, based on my training as a
19 research scientist.
20 Q And those are what? What are your opinions on
21 that issue?
22 A I have --
23 Q Issues?
24 A I have a lot of different opinions concerning
25 the different activities of CTR and the related activities.
12
1 So you want to be more specific. That would help me.
2 Q Sure.
3 Well, prior to today, I understand you had
4 meetings with various attorneys in preparation for your
5 deposition; is that right?
6 A I met with Mr. Michaels.
7 Q Okay.
8 Anyone else?
9 A And then last night, I -- I met with Mr. Leiter
10 and Ms. Tang.
11 Q Okay.
12 Can you relate for us what you and Mr. Michaels
13 discussed?
14 A When?

15 Q Well, during your meeting.
16 A The -- the fact that I've never done a
17 deposition. We talked about what the mechanics were in the
18 deposition, what it would be like. We talked about some of
19 the materials. He was interested in what my opinions were
20 about, various issues in CTR.
21 Q Which issues did he ask you about?
22 A Oh, a variety of things. I think we talked
23 about did I get an opportunity to read the documents having
24 to do with the cooperation between Dr. Hamill, who was the
25 medical director, who was gathering up information for the
13
1 1964 report to the Surgeon General and his correspondences
2 with CTR specifically with Dr. Little and Dr. Hockett.
3 Q Okay.
4 And your response was?
5 A Yes, I had an opportunity to review those
6 materials.
7 Q Okay.
8 What else did you discuss with him?
9 A We talked a little bit about Dr. Auerbach and
10 the beetles -- beagles.
11 Q And who is Dr. Auerbach?
12 A Dr. Auerbach was a researcher who carried out
13 inhalation studies on beagles.
14 Q And what opinions did you express to
15 Mr. Michaels about both -- on both subjects we just talked
16 about? What did you tell him other than you're familiar
17 with them?
18 A Why don't we start with the beagles?
19 Q Okay.
20 A Okay.
21 Q Sure.
22 A We talked about -- well, my opinions about the
23 beagles studies was that, if in these studies, they had
24 truly developed an animal model, that these animal models
25 would be presented to, and that people would have picked up
14
1 the beagle as the model system in order to investigate
2 problems in lung cancer. A major problem with our
3 understanding of lung cancer is that there are no animal
4 models.
5 Q That would be applicable to humans, you mean?
6 A No, there are no animal models.
7 Q Oh, okay.
8 A Just, there are no animal models. Virtually
9 any other disease, there are animal models, and so you can
10 carry out experiments to determine the mechanism by which
11 this disease runs its course, what genes are involved, all
12 of those things provide us then with the background to
13 develop diagnostic tools therapy, and one of the big
14 problems with cancer -- with lung cancer is that we don't
15 have any animal models; and CTR spent a great deal of time
16 and a lot of money trying to develop animal models.
17 It was critical for us to understand what
18 causes -- what causes lung cancer. And CTR spent close to
19 what, \$13 million in trying to develop these animal models.
20 They looked at -- they funded research which looked at
21 mice, beagles, ducks, chickens, rabbits, monkeys, and there
22 was a concerted effort to try to develop these animal
23 models; and animals don't get lung cancer.
24 Q Okay.
25 And how does that relate to this case

15

1 specifically?

2 A I think it's --

3 MR. LEITER: I'm going to object to the form.

4 MR. GOLDSTEIN: Okay.

5 MR. LEITER: Go ahead.

6 THE WITNESS: I think it's actually quite key to the
7 case.

8 BY MR. GOLDSTEIN:

9 Q Explain, if you would, please.

10 A Because I -- so back in 1954, Dr. Wynder
11 published a series of papers showing that if you painted
12 cigarette tar -- and that would be a -- a condensate of
13 cigarettes onto mice, that the mice would develop cancer or
14 would develop -- I don't want to call it "cancer" -- they
15 would develop these pallets on their skin that was in the
16 backdrop of a series of epidemiological studies which
17 suggested that cigarette smoking may be associated with
18 lung cancer.

19 And the way that we carry out research is that
20 epidemiological studies may very well provide a hint of a
21 cause and an effect. But epidemiological studies just by
22 the nature of the studies does not allow you to -- to
23 establish causation, and so the next step from the
24 epidemiological studies is to start develop model studies
25 in -- in animals and so Wynder's work was quite striking
16

1 because of the painting the cigarette tar on these -- on
2 these mice, the skin painting experiments.

3 However, these mice were not developing lung
4 cancer. These mice were not smoking cigarettes. They were
5 having their little backs shaved and then having all this
6 gunk painted on them. And ironically, if you do the same
7 experiment but use cold tar, not -- those little mice
8 actually developed lung cancer.

9 So here we have a situation which is -- in some
10 sense is artificial, the experiments were very good as an
11 indicator, but then what one needs to do is again go back
12 and develop these an models; and so without having the
13 animal models, if raised doubts in a lot of researchers
14 minds as to whether or not there was a causation between
15 cigarette smoking and lung cancer.

16 Q Now, as you sit here today, do you have an
17 opinion about that causation?

18 MR. LEITER: Object to the form as to what
19 causation.

20 BY MR. GOLDSTEIN:

21 Q The causation between lung cancer and cigarette
22 smoking.

23 MR. LEITER: Okay.

24 THE WITNESS: Excuse me. As a mother, as a
25 layperson, I will tell you that cigarette smoking causes
17

1 lung cancer, okay? And that's in a -- in the lay term of
2 causation. As a scientist, for us to understand causation,
3 we need to understand what the mechanism is. And we have a
4 lot of clues as to the process by which we can develop lung
5 cancer, but the final leap from inhaling smoke into the
6 lungs, how that causes lung cancer, we have a very -- how
7 that might cause lung cancer, is still in some senses up in
8 the air.

9 BY MR. GOLDSTEIN:

10 Q So that you would say that -- let me ask you

11 this question.
12 A Okay.
13 Q With respect to the -- your feelings as a
14 mother and as a -- I forget what you said -- a lay witness
15 or a citizen --
16 A A citizen, yes.
17 Q -- an observer of the media, you believe to a
18 reasonable certainty that there is a lot of material in the
19 public domain that says that there is a high link
20 between -- a high correlation between one that smokes and
21 one that develops lung cancer, but you're saying if I
22 understand you correctly, that there is a lack of finite
23 imperical evidence for you as a scientist to draw the
24 conclusion from the data?
25 MR. LEITER: I'm going to object to the form. It's
18
1 compound. I don't know if you want to ask it in pieces or
2 not.
3 BY MR. GOLDSTEIN:
4 Q May be better if she asked me, then if I have a
5 problem, I can go back. That's fine.
6 A What part of the question should I start with?
7 Q Let me rephrase.
8 Is it correct then, that what your testimony is
9 that is that you feel as a scientist there's a lack of
10 imperical evidence linking cause and effect between
11 cigarette smoking and developing lung cancer?
12 A I think you have to review that question in
13 particular time frames. So in 1954, there was not
14 sufficient evidence to suggest causation, and as we work
15 from the 50's, the 60's, 70's to the present, we have a
16 very good understanding of how, for example benzepylene,
17 which is a compound in cigarettes, can cause cancer; but we
18 don't have a good understanding as how do we get from
19 cigarette smoke which may contain benzepylene, how that
20 is -- is -- is causing this trigger which may cause cancer.
21 So part of your question -- it's difficult to
22 answer your question because it has to do with at what time
23 during this scientific -- this history of science we're
24 referring to.
25 Q Well, I'm talking about right now, 2001.
19
1 A 2001.
2 Q As you sit here today?
3 A Okay.
4 Q Based on all the activities that you've
5 conducted, based upon all your resume items and all your
6 materials that are listed in the list of documents that
7 I've been invited to look at, is it your opinion today that
8 you're still of the belief that there is a lack of
9 sufficient evidence for you as a scientist to link the
10 causation directly between cigarette smoke and lung cancer?
11 A As of today, okay, 2001, what scientists will
12 find is that if there is enough correlative evidence -- it
13 may be that we never get that last link, but if there is
14 enough correlative evidence, then it is enough to say,
15 "Yes, there is a causation"; and so as of today, I would
16 say, "Yes, there is a causation between cigarette smoking
17 and lung cancer."
18 Q Okay.
19 Is there -- I want to try to quantify the
20 amount of doubt that you have on a one to a hundred scale,
21 if you can.

22 A I can't.
23 Q In other words --
24 A That's not how we do science. That's not how
25 we analyze problems.
20
1 Q Well, let me give you another example.
2 A So as a layperson, I'm quite -- you know,
3 that -- you know, in terms of my own practice, I don't
4 smoke. People don't smoke in my home. They don't smoke in
5 my car. We sit in nonsmoking areas of a restaurant, as far
6 away from the smokers as possible.
7 Q Why is that?
8 A I don't like cigarette smoke.
9 Q I --
10 Aside from your personal dislike of cigarette
11 smoke, any other reasons that you know of as a scientist?
12 A Well, we know that cigarette smoking is
13 dangerous to your health.
14 Q Okay.
15 A We -- you know -- that's different than saying
16 there's a causation. There's enough of a situation that
17 it's not worth it to me to take -- to take the risk.
18 Q Okay.
19 And would you feel that if you -- you said you
20 are a mother.
21 How many children do you have?
22 A One.
23 Q Okay.
24 If your child came to you -- and I don't know
25 how old he or she is, but whatever age they are -- if they
21
1 came to and you said, "Mom, I'd like to smoke," would it be
2 the type of thing that you would permit them if they were
3 still living in your house?
4 A My daughter would never come to me to say that.
5 She has based on my behavior, my examples, based on her
6 listening to the television, advertisements, her basic
7 knowledge base is one in which she knows that cigarette
8 smoking is dangerous to her health.
9 Q Would you -- do you believe that it would pose
10 an unreasonable risk to her health if she did begin
11 cigarette smoking at her age?
12 A Oh, she knows it would. She's got a heart
13 condition.
14 Q Okay. All right.
15 So clarify for me, if you would, you're
16 probably the best reason why I never decided to pursue
17 science, because I -- you have lost me in the dirt. But I
18 wanted to ask you --
19 A The dirt?
20 Q Sorry. Whatever term you prefer.
21 MR. LEITER: We're going to object to any
22 characterization.
23 MR. GOLDSTEIN: I'm kidding.
24 Let the record reflect we're laughing.
25 Q Could you explain for me in lay terms, if you
22
1 would then, just so that I fully understand, I know --
2 well, beyond what you've said about -- beyond what you've
3 already testified about the lack of the final link, if you
4 would --
5 A Uh-huh.
6 Q -- for -- you really don't entertain some

7 doubts that maybe the printing ink that's used on the
8 cigarettes may cause it, as an example, may cause cancer?
9 MR. LEITER: I'm going to object to the form.
10 You can answer.
11 THE WITNESS: Could you repeat that?
12 BY MR. GOLDSTEIN:
13 Q Well, I was being a little facetious, but as
14 you sit here today, you're fairly certain that there's a
15 high -- high enough correlation between cigarette smoke and
16 lung cancer, so at least, for your own daughter and
17 yourself not to run that health risk; right?
18 A Correct.
19 Q Okay.
20 Now -- well, let's go back to your meeting with
21 counsel.
22 Tell me what else you discussed other than CTR
23 and -- if you can recall?
24 MR. LEITER: Can we be a little more definitive
25 about what meeting, what counsel? It's been a while since
23
1 we were there.
2 BY MR. GOLDSTEIN:
3 Q Yesterday, meeting with Mr. Michaels.
4 A We talked -- we talked about two recent
5 articles that I had examined. I was pointing out some
6 interesting information in these articles.
7 Q Which articles were those?
8 A They are listed --
9 Q I'm going to show you --
10 A On that list of information.
11 Q Well, could you tell me which ones they are?
12 A (Witness complies.)
13 Q Any others?
14 A There's that article, and there was a second
15 article which I ran across yesterday before I left my
16 department that I thought was also interesting; and I had
17 picked it up and started reading it.
18 Q And what was that article?
19 A It was a summary -- it was a summary of this
20 meeting where the first article came from of where do we
21 stand now in understanding cancer?
22 Q Okay. Now, that's a 1994 article.
23 Why was he interested or concerned about this?
24 Is it a particularly comprehensive article?
25 A No, he wasn't necessarily concerned about it.
24
1 Q Oh.
2 A It was in the course of my research, in the
3 course of my reading my research journals, in the course of
4 preparing for the classes that I teach, I deal with this
5 type of information all the time, and so I'm constantly
6 seeing various research articles; and I pull them up, and I
7 read them partly for having to do with this case, partly
8 because I lecture on some of this material, partly because
9 I'm interested in it --
10 Q Okay.
11 What did -- what's the upshot of the molecular
12 genetic changes found in human cancer, and its precursor to
13 this article?
14 A First off, it tells us that there are at least
15 10, if not 20 genes, which have to be mutant or not
16 functioning in order to develop lung cancer.
17 Q Why's that significant?

18 A It's very significant. It's not one -- one
19 defect in one gene when you get lung cancer. There's a
20 whole progression of events that need to take place before
21 you develop lung cancer. And it's truth for all cancers.
22 Otherwise, we probably wouldn't be here if we only had
23 this -- if we had one mistake in one gene, you develop
24 cancer.

25 You know, the body through evolution has -- has
25

1 developed mechanisms to try to monitor changes in the DNA
2 to prevent the formation of these different mutations. If
3 we can monitor those -- these changes in the DNA and
4 correct them, then we have a way of preventing things
5 like -- like lung cancer.

6 Q Is it your belief that Philip Morris in this
7 case as an example would raise this article as somewhat of
8 a defense to a suggestion that lung cancer somehow is
9 caused by cigarette smoking?

10 MR. LEITER: I'm going to object to the form. Calls
11 for speculation. Calls for a legal conclusion.

12 BY MR. GOLDSTEIN:

13 Q Okay. Well, let me rephrase.

14 You can answer that. He hasn't instructed you
15 not to answer. If you care to. If you know, but --

16 A I'll -- I'll let you rephrase.

17 Q Okay.

18 Well, can you recall what you and Mr. Michaels
19 specifically said concerning the Gazdar article? More
20 than -- other than what you've already testified to?

21 A It was basically my -- my telling him about the
22 article, telling him about, you know, 10 to 20 genes are
23 involved in the development of lung cancer. Pointing out
24 that there is a correlation of small cell lung cancer in
25 smokers that those individuals have a particular mutation
26

1 in the Rb locus where other patients who have small lung
2 cell cancer who are nonsmokers have a very different
3 mutation.

4 Q How does that -- how do those facts apply to
5 this case, in your opinion?

6 A Just part of the general information.

7 Q Well, other than being extraordinarily
8 interested about these things, could you -- could you tell
9 me what you think the nexus is between an article such as
10 that and the Boeken case?

11 A I -- what do you mean by "nexus"?

12 Q Relationship between the two.

13 In other words, if, in fact, you accept the
14 statements in the Gazdar article as being true, how does
15 that impact one way or the other on the plaintiff's claims
16 in this case?

17 A What are the plaintiff's claims?

18 Q Well, have you reviewed any materials?

19 A I read through the -- the plaintiff's
20 complaint. Is that what you call it?

21 Q Right.

22 A It was a lot of legal jargon.

23 Q Did you read -- you read a number of other
24 cases, opinions and trial exhibits, and things of that
25 nature, from other legal cases; right?

27

1 A I read some testimony and some affidavits. Are
2 testimony and affidavits the same thing?

3 Q Not necessarily.
4 Well --
5 A Okay.
6 Q I mean -- you read some documents relating to
7 project Hippo, as an example?
8 A Yes, I did.
9 Q Did you -- did -- based on -- on your review of
10 these materials, could you tell me what significance you
11 believe your testimony has on -- what -- what bearing it
12 would have in terms of the issues that Mr. Boeken has
13 raised in his Complaint --
14 MR. LEITER: Objection to the form. Calls for
15 speculation.
16 BY MR. GOLDSTEIN:
17 Q If you could answer, you may go ahead.
18 A Could you repeat your question?
19 MR. GOLDSTEIN: Could you read it back, please?
20 (The record was read.)
21 MR. LEITER: Same objection. Also, objection, too,
22 because it calls for a legal conclusion.
23 BY MR. GOLDSTEIN:
24 Q Go ahead.
25 Sometimes attorneys say things to preserve the
28
1 record for trial.
2 But you can -- unless he tells you don't answer
3 that or instructs you not to answer, you may go ahead.
4 A You'd have to explain to me what Mr. Boeken's
5 complaints are.
6 Q Well, from reading the lawsuit, the
7 Complaint --
8 A Uh-huh.
9 Q See -- you see that he's complaining that he
10 developed lung cancer, and he's suing for damages because
11 he obtained lung cancer from smoking cigarettes
12 manufactured by the defendants.
13 A Uh-huh.
14 Q There may be other claims. I don't mean to
15 oversimplify it, but that's the simple distillation.
16 Is it your belief that the Gazdar article in
17 one way or another impacts on any of the -- of the -- of
18 those issues that I've just articulated?
19 MR. LEITER: Same objections.
20 THE WITNESS: I'm sorry if I'm -- I'm not following
21 you.
22 BY MR. GOLDSTEIN:
23 Q Okay.
24 A So you would like to know, how does this
25 article impact on, on what? On --
29
1 Q In lay terms, if you could, explain for me what
2 the -- the fact that there were 10 or 20 correlative
3 factors that were -- that we've discussed --
4 A Genes.
5 Q -- genetic factors that had to be mutated in
6 order to cause lung cancer?
7 A Uh-huh.
8 Q What significance does that have to a claimant
9 that would be suing a tobacco company?
10 MR. LEITER: I'm going to object. Calls for
11 speculation. Calls for a legal conclusion. It's vague.
12 THE WITNESS: I think we'd get further along if you
13 could tell me specifically what Boeken's complaints are

14 relative to CTR because I'm here as an expert witness --
15 MR. GOLDSTEIN: On CTR.
16 THE WITNESS: -- CTR-related matters, and yes, I
17 read through the Boeken complaints because I had never
18 read -- I didn't know what this case was specifically
19 about.
20 BY MR. GOLDSTEIN:
21 Q Okay.
22 A There was a tremendous amount of legal jargon
23 in it, and it didn't really help me to understand what his
24 complaint was relative to CTR.
25 Q You're here to say basically that from
30
1 everything you know, that CTR was -- is a legitimate
2 independent research organization that was doing good work;
3 right?
4 A In general, yes.
5 Q Okay.
6 And you're here to say there's an absence of
7 bias towards the tobacco companies based upon your
8 observations; is that right?
9 MR. LEITER: I'm going to object to the form.
10 THE WITNESS: Bias by whom?
11 BY MR. GOLDSTEIN:
12 Q Well, in other words, when you were working for
13 Dr. Hall, during that period of time, you never saw an
14 instance where any person from a tobacco company told you
15 what conclusions to reach in advance of undertaking your
16 research; correct?
17 A Certainly I never spoke to any tobacco
18 representatives. And I'll tell you, Dr. Hall would not
19 allow anyone to tell her what to do.
20 Q Okay.
21 What -- can you explain for me in a little bit
22 greater detail what Dr. Hall was doing when you worked with
23 her? What was the title of her project?
24 MR. LEITER: Referring to the project that was
25 funded, in part, by CTR?
31
1 MR. GOLDSTEIN: Yes.
2 MR. LEITER: Okay.
3 THE WITNESS: Dr. Hall's project involved -- was
4 involved in understanding nicotenic receptors.
5 BY MR. GOLDSTEIN:
6 Q Okay.
7 And during what years did you work with her?
8 A I worked with her when I was an undergraduate,
9 so that would be '77 and -- look at it here. '75 and '76.
10 Q Did you ever conduct -- strike that.
11 Other than your work with Dr. Hall, what other
12 contact did you have with CTR subsequent to that time?
13 A Personal contact?
14 Q Yes.
15 A I had applied for funding with CTR and Harmon
16 Mcallister, after I was funded, carried out a site visit.
17 Q When did you apply for funding?
18 A In 1990.
19 Q And did you do that in writing?
20 A Yes.
21 Q Okay.
22 And who did you send it to, to CTR?
23 A CTR.
24 Q How soon after you applied did they get back to

25 you?

32

1 A I don't recall offhand. It was probably about
2 six months.

3 Q And were you approved for funding?

4 A Yes, I was.

5 Q And how much was funded to you?

6 A I believe it was about 90,000 a year for three
7 years.

8 Q And where was it that you undertook your
9 research physically?

10 A It was the University of Illinois at Chicago.

11 Department of Biochemistry.

12 Q And did you have anybody working with you under
13 that \$90,000 funding?

14 A I had a graduate student and a technician and
15 several undergraduates.

16 Q How much of the \$90,000 went to others -- other
17 persons other than you?

18 MR. LEITER: I'm --

19 MR. GOLDSTEIN: Let me state it another way.

20 Q How much of the 90,000 were you allowed to
21 keep?

22 MR. LEITER: Object to the form. You mean, as -- as
23 a salary or as profit?

24 MR. GOLDSTEIN: As compensation in any form.

25 MR. LEITER: If any.

33

1 THE WITNESS: To me personally?

2 BY MR. GOLDSTEIN:

3 Q Right.

4 A Maybe 5,000.

5 Q A year?

6 A A year.

7 Q Okay.

8 So that 85,000 of that was spent on the
9 research or paying other people?

10 A Correct.

11 Q Okay.

12 What was the title of your funded project?

13 A I'd have to look that up. I can't give you the
14 precise title, but it was involved in isolating fatty acid
15 binding proteins.

16 MR. GOLDSTEIN: Off the record.

17 (An off-the-record discussion was held.)

18 BY MR. GOLDSTEIN:

19 Q Okay.

20 During the time that you worked on this funded
21 project, did -- were you required to report to the CTR?

22 A The CTR asked for a progress report, an annual
23 progress report.

24 Q And to whom was that given at CTR, if you
25 remember?

34

1 A Just sent to CTR.

2 Q Okay.

3 What was the conclusion that you reached at the
4 end of the project?

5 A Relative to the research?

6 Q Right.

7 A The fatty acid binding protein genes were going
8 to be extremely difficult to isolate drosophila.

9 MR. LEITER: You might want to spell it.

10 MR. GOLDSTEIN: Go ahead. Why don't you spell it.
11 THE WITNESS: Fruit flies.
12 BY MR. GOLDSTEIN:
13 Q Oh, I should have known that. Okay.
14 A And because of that, during the course of the
15 three years, we changed part of the focus of the project to
16 focus on genes involved in fat cell development.
17 Q I take it that CTR has been the recipient of
18 criticism from certain quarters about their objectivity,
19 then, is that your understanding as well?
20 A I have read some documents criticizing CTR.
21 Q And where did you obtain those documents?
22 A Some of those documents came from Mr. Michaels.
23 Q When was that?
24 A I can't tell you precise dates. I have worked
25 with Mr. Michaels since the fall of '98, and during that
35
1 time, I have requested and he has also sent me various
2 articles to read.
3 Q Okay.
4 That wasn't obviously all in preparation for
5 this case?
6 A No.
7 Q Well --
8 A I didn't know -- I didn't know about this case,
9 and you'd have to ask Mr. Michaels whether he was aware of
10 this case in '98.
11 Q Okay.
12 What was the reason that you were communicating
13 with Mr. Michaels then, in '98 other than he wanted to find
14 out if you'd be willing to offer your opinions?
15 A Uh-huh.
16 Q Anything else other than that?
17 A He asked whether or not I would be willing to
18 serve as an expert witness concerning CTR's activities and
19 other activities relating to CTR.
20 MR. LEITER: Just to be clear -- and I apologize for
21 interrupting -- earlier you had asked about conversations
22 with another lawyer at Debevoise & Plimpton, and now we're
23 talking about conversations with Mr. Michaels. I just want
24 to be sure we're not confused with the two.
25 MR. GOLDSTEIN: No, I got it.
36
1 Q When was it that you first started speaking to
2 Mr. Michaels relative to Mr. Green?
3 A I believe our first meeting, I had both
4 Mr. Michaels and Mr. Green, and then I believe Mr. Green
5 left for another firm; and since then, I've been working
6 with Mr. Michaels.
7 Q Okay.
8 When was the first time that you were
9 compensated in any fashion by that firm?
10 A Soon after, I sent them my first billing, but I
11 can't tell you precisely when that is. I don't remember.
12 Q But was that sometime in 1998?
13 A Knowing me, it was probably not until '99. I'm
14 very slow at sending them bills.
15 Q Okay.
16 But it was -- he was speaking with you. You
17 were speaking with him, and then he was hiring you just to
18 review documents and get up to speed, if you will?
19 A Yes.
20 Q Okay.

21 Approximately how much did you bill him or his
22 firm prior to being involved in this case?
23 A Over the last two, two-and-a-half years -- that
24 would be prior to this case -- I've billed them about
25 52,000.

37

1 Q And were you ever asked to express an opinion
2 to him in writing? In other words, share your opinions on
3 CTR, things like that?

4 MR. LEITER: In writing?

5 MR. GOLDSTEIN: Right.

6 THE WITNESS: No. Well, he -- I have never
7 physically written out a report for him about my opinions
8 on CTR.

9 BY MR. GOLDSTEIN:

10 Q Okay.

11 Did you ever write one yourself and just not
12 transmit it to him?

13 A Oh, I have notes, lots of notes --

14 Q Okay.

15 A -- but nothing -- no formal writing.

16 Q Do you have notes of communications that you
17 had with him?

18 A Yes, I do.

19 Q And is that dating back to like 1998?

20 A Or '99, probably.

21 Q Okay.

22 A Yeah.

23 Q Whenever you got around to start writing them
24 up. Okay.

25 What -- what is your present employment?

38

1 A I'm an associate professor in the Department of
2 Biological Sciences, the University of Nevada, Las Vegas.

3 Q And do you teach courses there?

4 A Yes, I do.

5 Q How many courses do you teach?

6 A Depends on a given semester, but I teach
7 molecular biology, genetics, developmental genetics, an
8 honors course, DNA gene cloning.

9 Q Okay.

10 A Then I also teach a whole series of
11 graduate-level courses having to do with specialized
12 topics. Transcription, homeotic genes and those particular
13 courses we deal with two -- two aspects, one are the basic
14 concepts, the biological processes, and the other aspect is
15 how do you critically read a paper? How do you assess
16 papers? How do you develop critical thinking?

17 Q Okay.

18 How many courses are you -- have you taught in,
19 let's say, in the last 12 months? I don't mean number of
20 times you've appeared as -- at the lectern to say, "We're
21 starting today class"? I don't mean that. I mean, which
22 of these courses have you taught in the last year?

23 A I have taught molecular biology twice -- so in
24 the last two semesters?

25 Q Yes.

39

1 A So molecular biology, twice, the whole series
2 of graduate-level courses, and then this current semester,
3 I'm teaching the honors course; and then next semester I
4 will be picking up the genetics course.

5 Q Okay.

6 Where did you conduct your study of human
7 genetics with chromosomes?
8 A I didn't conduct a study of human genetics with
9 chromosomes.
10 Q That's not an area of your expertise, then?
11 A It is an area of my expertise, but I have not
12 conducted research in that field.
13 Q Okay.
14 Where did you acquire your knowledge? It was a
15 poor question on my part. I'm sorry.
16 A My knowledge about?
17 Q Genetics and chromosomes?
18 A I have a Ph.D from the University of California
19 at Berkley from the Genetics Department.
20 Q Okay.
21 Could you tell me what a 4-XXXX chromosome is?
22 A 4-XXXX?
23 Q 4-X, yeah.
24 A 4.X's?
25 Q Yes.
40
1 A Probably, dead.
2 Q Okay.
3 Had you heard of that before?
4 A No.
5 Q Okay. All right.
6 What percentage of your total income, let's say
7 in 1999, was the money that you received from Debevoise &
8 Plimptom, was that it? I can't ever pronounce that name.
9 A Maybe a fourth.
10 Q Okay.
11 Did they ever ask you to do any research
12 projects?
13 A What kind of research?
14 Q Any -- anything.
15 A What bench or -- I mean, I have treated this
16 whole -- this whole thing as -- in some sense as a research
17 project. They asked me to develop some opinions about CTR,
18 and I have gone off on my own to investigate CTR in the
19 sense that I spent a fair amount of time pulling up other
20 litigation to see whether or not the litigation that do
21 Mike -- that Mr. Michaels has sent me fits into the whole
22 history of science at that time.
23 I pull -- I have turned around, and I've asked
24 him to provide me with other documents such as grant
25 applications. If CTR were coercing the investigators, I
41
1 would want to know, how would they be able to do that?
2 From my personal experience, they never monitored what I
3 was publishing.
4 There's no mechanism by which they would
5 monitor what I was publishing. All they asked was to have
6 reprints after it was published, so there's no mechanism to
7 have them prevent you from publishing material. In theory,
8 they could drop your funding if they didn't like what you
9 were publishing.
10 And so I -- what I asked Mr. Michaels to do for
11 me is to give me the grant applications both what was
12 funded and what wasn't funded for '54, '64 -- I'm sorry --
13 '57, '67, and '77 so that I could review those grants both
14 published and unpublished to determine whether there was
15 any indication of people not being renewed if they were
16 publishing things that might be viewed as -- as adverse to

17 the tobacco industry.
18 Q Okay.
19 A So in that sense -- in that sense, I initiated
20 my own research into this -- into these matters.
21 Q Okay.
22 So before you were retained, I'm using that
23 term not in the pejorative sense, but just whatever it was,
24 there was some kind of understanding that was reached
25 between you and the New York firm, begins with a "D" --
42
1 A Do we edit that out?
2 Q That's objectionable.
3 Debevoise & Plimptom, okay.
4 Was it your understanding that you were being
5 hired to investigate the CTR to determine what's up with
6 them?
7 A I'm not an investigator in -- in the sense of
8 a --
9 Q Well, but -- maybe you are in a scientific
10 sense, though.
11 A I was asked to review materials and develop a
12 sort of expert opinion, a set of expert opinions, about CTR
13 and activities relating to CTR. For example, was this a
14 bona fide research program in terms of funding good
15 science? Was it the appropriate science to fund at the
16 time in the 50's, 60's and 70's? How does that fit into
17 the research environment at that time?
18 Q When you first started out, did you indicate to
19 Mr. Green or Mr. Michaels that you were favorably disposed
20 to CTR because of your involvement? In other words, that
21 you are somebody that had a prior favorable experience with
22 that entity?
23 A I -- yes. I had a -- a -- very favorable
24 feelings towards CTR --
25 Q Okay.
43
1 A -- and when I started out, based on my -- my
2 personal experiences, I felt that CTR was a good, reputable
3 funding agency.
4 Q Okay.
5 And you didn't reach the ultimate conclusion
6 that you have today until you conducted all those other
7 research; isn't that right?
8 MR. LEITER: I'm going to object to the form.
9 MR. GOLDSTEIN: I can rephrase.
10 MR. LEITER: Okay.
11 BY MR. GOLDSTEIN:
12 Q The opinion that you have today is consistent
13 with the opinion that you initially had when you spoke with
14 them the first time; right?
15 MR. LEITER: Object to the form. It's vague as to
16 what opinion we're talking about.
17 BY MR. GOLDSTEIN:
18 Q Okay.
19 Is it fair to state that the result of your
20 inquiries that you've conducted since your first discussion
21 with those attorneys came to the same conclusion you held
22 previously; namely, that you felt that they were doing good
23 research?
24 A They're funding good research.
25 Q Funding good research, okay.
44
1 A Actually, my opinions have changed since

2 reviewing all this material. I'm even more impressed with
3 CTR. Dr. Little -- the guy was a genius. He had a
4 tremendous amount of foresight, not only in pushing for the
5 development of mouse colonies at Jackson Labs, but also
6 have the foresight that given the problems with the animal
7 models systems, the foresight to really push and support
8 tissue culture work. And at that time that they started
9 that, we actually knew about more culturing plant tissues
10 than we did about mammalian tissues that that work has been
11 absolutely critical in our understanding of cancer, our
12 understanding of a variety of developmental processes,
13 being able to clone a million genes, it just -- tissue
14 culture is -- is a mainstay of modern biomedical science.

15 Q Did -- in the context of your discussions with
16 Mr. Green and Mr. Michaels, did either of them express the
17 belief that -- that you shared? In other words, that CTR
18 is a good entity, that they fund good research?

19 MR. LEITER: I'm going to object to the form.
20 You can answer.

21 THE WITNESS: They never explicitly said to me, "
22 Dr. Hoshizaki, CTR is a wonderful institution, and you know
23 this is how you should feel." I mean, that -- we never had
24 any -- any conversations even remotely of that -- of that
25 ilk.

45

1 BY MR. GOLDSTEIN:

2 Q You understood, though, that when they were
3 retraining you, that they were of the opinion that CTR was
4 a very good or that they funded good work?

5 A They were the lawyers that had been, I presume,
6 hired by CTR. But I don't know what -- what their personal
7 opinions are of CTR.

8 (Mr. Carlson enters the proceedings.)

9 BY MR. GOLDSTEIN:

10 Q You knew for sure that they weren't -- they
11 weren't among the critics of CTR; right? I mean --

12 A I don't -- I don't know. I --

13 Q Okay.

14 A Because we never had those conversations.

15 Q Okay.

16 Well, did they say, for example, "Here's this
17 entity out here, and I'd just like you to check it out and
18 tell me what you think"? Words to that effect?

19 MR. LEITER: I'm going to object to the form. It's
20 vague as to time, place, speaker.

21 BY MR. GOLDSTEIN:

22 Q Okay.

23 If you can, answer.

24 A Could you restate, please?

25 Q Yes.

46

1 Did either -- let's talk about Mr. Michaels.

2 Did you have a clue one way or the other

3 whether he was in favor of or against CTR when he had his
4 conversations with you in 1998?

5 MR. LEITER: I'm going to object to the form. It
6 calls for speculation, and it's vague.

7 BY MR. GOLDSTEIN:

8 Q Can you answer?

9 A I lost -- you'll just have to --

10 Q It throws witnesses and lawyers, when lawyers
11 object, but that's okay. He's being very nice.

12 Did you --

13 A I'd be happy to answer your questions. It's
14 just, I'm having a hard time following what you're asking.
15 Q Okay.
16 If you were to talk to somebody after your
17 first meeting --
18 A Uh-huh.
19 Q -- with Mr. Michaels and somebody was to say,
20 "What do you think about Michaels and the CTR? What's his
21 bias, either for or against CTR?"
22 Would you have been able to comment on that?
23 MR. LEITER: I'm going to object. It calls for
24 speculation and my favorite objection is an incomplete
25 hypothetical. I've been waiting for weeks to use that one.
47
1 BY MR. GOLDSTEIN:
2 Q Okay.
3 MR. LEITER: But you can answer, if you can.
4 BY MR. GOLDSTEIN:
5 Q Can you answer?
6 A Perhaps I could answer it this way.
7 Q Sure.
8 A I talked with Mr. Michaels and Mr. Green. I go
9 home, and I -- I see my daughter. And she'll say, "Well,
10 how was your meeting with the lawyers? What do they want
11 you to do?"
12 And I told her, "Well, it was a very pleasant
13 meeting, and they would like mommy to review some materials
14 about CTR and tell them what she thinks about it."
15 That's --
16 Q How soon was it that you gave them an opinion
17 about CTR?
18 A We talk about CTR when Mr. Michaels, when we
19 meet, and he will ask, "How's the reading going? How's the
20 material going?" You know, occasionally, he'll show me
21 documents and say, "Have you read these documents? Does
22 that change your opinion of CTR?" He'll show me more
23 documents, and we'll talk about the contents of the
24 document. Oftentimes is, he'll show me documents, and my
25 first response is, "I need to know the context of these
48
1 documents."
2 So for example, he's given me -- shown me a
3 couple of public statements, and before I can provide any
4 opinion, I've asked him, "Could you please provide me with
5 all the context," which means that the wall of documents on
6 my -- in my study has just now gotten bigger because then
7 they send me volumes of more information that I've
8 requested.
9 Could we take maybe one break?
10 Q Oh, sure. Any time.
11 Let's go off the record.
12 (A brief recess was taken.)
13 MR. GOLDSTEIN: Back on the record.
14 Q Where did you have your meetings with
15 Mr. Michaels?
16 A Normally it would be in a hotel near the
17 university.
18 Q In Las Vegas?
19 A In Las Vegas.
20 Q He would fly in from New York?
21 A I don't know where he was flying in from.
22 Q Okay.
23 Did you ever go to New York to meet with him

24 there?
25 A Once.
49
1 Q And when was that?
2 A I can't remember.
3 Q Okay.
4 Can you describe for me how many letters you've
5 received from Mr. Michaels in the course of, say, since
6 1998?
7 A Letters?
8 Q Yeah.
9 A None.
10 Q No letters? Nothing in writing?
11 A I received from him things like, "Here are the
12 materials you requested," and a whole box of materials, but
13 no correspondences.
14 Q Okay.
15 Did he play a hand in -- in determining which
16 direction you would go in terms of your research?
17 MR. LEITER: I object to the form. It's vague.
18 BY MR. GOLDSTEIN:
19 Q I don't mean to control your research in a
20 pejorative sense or any improper motive ascribed to him.
21 I'm wondering whether he ever told you what to
22 look up? Did he ever say, "I want you to look up something
23 like this article, research for me please"?
24 A No.
25 Q Okay.
50
1 Did he ever put any limits on what you could do
2 or couldn't do in terms of your investigational research?
3 A Certain -- well, let's not call it research --
4 my --
5 Q Your investigation.
6 A Or my studies or --
7 Q Okay.
8 A Yeah.
9 Q Fine. Your study.
10 A Certainly not.
11 Q Okay.
12 Any monetary limitation?
13 A No, that's never been discussed.
14 Q Okay.
15 So you were free to spend as much time as you
16 wanted undertaking a purchase site of this -- of this
17 study?
18 A Yes, I was. Mr. Michaels, although was very
19 sensitive to the fact that I do have a day job. I am an
20 assistant professor, and I'm mother and that this project
21 would not be my, you know, life goal. This was a side
22 project that I could do fitting in with my other duties --
23 Q Okay.
24 A -- as a professor and as a mother.
25 Q Did you understand that when he contacted you
51
1 that -- who his client was?
2 A I understood his client was CTR.
3 Q Okay.
4 And, oh, and so you understood that you were
5 doing an investigational research for CTR?
6 A Yes.
7 Q I blew it. I should have said "study." You
8 were doing a study for CTR, okay.

9 A A study of CTR --
10 Q For CTR?
11 A In that -- I was doing a study of CTR and that
12 Mr. Michaels was retained by CTR.
13 Q Okay.
14 In the course of trying to compile data for
15 your study, was it important for you to consider some of
16 the critical and negative comments that were made about
17 CTR?
18 A Of course.
19 Q And did you interview anybody in that context,
20 anybody --
21 A Certainly not.
22 Q Okay.
23 You relied upon articles or printed materials?
24 A Yes, I did.
25 Q And where did you get those critical articles
52
1 or materials?
2 A They came from Mr. Michaels.
3 Q Okay.
4 Can you tell me which ones they were, or can
5 you describe for me what you reviewed that was of a
6 critical nature of CTR?
7 A Oh, I think all of that materials listed in --
8 what do we call this?
9 Q A list of documents reviewed by you.
10 A Okay. It's -- it's in that list of documents
11 in general, and I'd have to go through the whole list in
12 order to tell you all -- all of the documents; but in
13 general, there would be correspondences between individuals
14 that perhaps felt that money would be better spent by them
15 rather than on CTR, for example.
16 Q Could you please go through that maybe with
17 your pencil, you can just check mark which of the documents
18 and materials that you reviewed you felt were critical of
19 CTR.
20 MR. LEITER: Just one logistical moment.
21 Do we want to mark this as an exhibit so we can
22 be clear of what she's looking at and what she's marking.
23 MR. GOLDSTEIN: Why don't we mark as Exhibit 1 a
24 List of Documents that were reviewed by Dr. Deborah K.
25 Hoshizaki. Exhibit 2 a copy of her C.V, if that's all
53
1 right with you.
2 MR. LEITER: Thank you.
3 (Whereupon, the documents referred to
4 were marked Plaintiff's Exhibits 1 and
5 2 for identification, copies of which are
6 attached hereto.)
7 BY MR. GOLDSTEIN:
8 Q If you could just go through and put a check
9 mark next to any documents that you feel were considered by
10 you that were of a critical nature to -- mentioning CTR.
11 A That were considered by me to be critical of
12 CTR?
13 Q Right.
14 (A brief recess was taken.)
15 BY MR. GOLDSTEIN:
16 Q While the witness is looking for documents
17 listed in the list.
18 A I think most of the statements which are
19 critical of CTR are in this group of papers listed in

20 statements of policies, press releases and other documents
21 and files of CTR.

22 Q Okay.

23 And that's found on page what?

24 A On page 8.

25 Q Okay.

54

1 A Also listed are a whole series of news
2 articles. I'd have to go look and relook to see whether or
3 not CTR is mentioned specifically in these articles. I
4 couldn't tell you just off the top of my head.

5 Q Okay.

6 Can you tell me when the -- when the last time
7 was you reviewed the file that you just checked? In other
8 words, how familiar are you with that?

9 A I believe this is a file which I probably
10 looked at maybe two or three nights ago.

11 Q How big of a file was it?

12 A It's about --

13 Q Three, four inches?

14 A Four inches.

15 Q Okay.

16 And mostly press clippings of critical
17 articles?

18 A Not so much press clippings. Correspondences,
19 though, I believe there are some correspondences of
20 individuals who may be in the tobacco industry discussing
21 CTR.

22 Q Oh, like internal-type communications?

23 A Yes, internal memos.

24 Q And those were people that were critical, you
25 felt that in some of those internal correspondence that you
55

1 read, some of those people were critical of the research
2 that CTR had done?

3 A The internal memos were -- were of people
4 within the tobacco company, and they were critical of CTR.

5 Q And what did they say --

6 A In general terms?

7 Q General terms, yeah.

8 A Okay. In general terms, they felt that
9 basically they were complaining that they should be -- the
10 money should be spent on their research programs within the
11 companies rather than being spent by CTR. They were
12 complaining that they didn't have any control over CTR.

13 Q Okay.

14 Did you do any computerized research of CTR
15 like Lexus? Nexus? Do you have access to Lexus at all?

16 A What is "Lexus"?

17 Q Oh, it's a -- it's a trade name of legal
18 research tool which I guess you're not familiar with.

19 Did you -- other than looking up the -- well,
20 let me rephrase this.

21 Is it correct that most of your study was
22 consumed with reviewing articles and documents that were
23 provided by Mr. Michaels?

24 MR. LEITER: I'm going to object to that as vague.

25 / / / /

56

1 BY MR. GOLDSTEIN:

2 Q Well, let me ask you this --

3 A Mr. Michaels probably provided me with maybe a
4 fourth of the different types of articles -- types of

5 documents that I have, and I believe I probably requested
6 the remaining either from their legal staff to pull papers
7 for me. I -- I think that in reference to your question
8 about Lexus and legal documents, as a scientist, for
9 example, everything I had read suggested that there was not
10 an animal model for lung cancer, so what I did is, I went
11 into my equivalence of Lexus NCBI, and a medical line
12 search through the National Library of Congress to pull up
13 what is known, what's been written about animal models and
14 lung cancer; and what you find is, there's basically
15 nothing.

16 And for many of the articles that I did want to
17 see, the few I could find were back in the 40's, 50's,
18 maybe early 60's. Those are difficult for me to -- to
19 obtain, and oftentimes, I would then send or ask
20 Mr. Michaels, "Could you please get the following papers
21 for me," and let their legal staff run down to the library,
22 xerox and send me stuff.

23 Q Now --

24 A So when you say, you know, "Did Mr. Michaels
25 send you all of this?" Yes, physically he did send them to
57

1 me. Oftentimes it's -- though, at my request of having his
2 people run down and do that rather than sending my graduate
3 students off to another city to try to find an article.

4 Q On those occasions when you'd make a request of
5 him, would that be usually by e-mail or, you know, in
6 writing form or how would you do that?

7 A Oftentimes, it would be verbal.

8 Q Any other means of requesting it of him?

9 A I think I wanted to see the original articles
10 after having read the abstracts of these articles in the
11 annual reviews, and in this case, I just e-mailed him my
12 whole list of articles that I wanted him to obtain for me.

13 Q Do you have any knowledge about other lawsuits
14 that Philip Morris has been involved in involving people
15 who have sued -- who have obtained -- who have acquired
16 lung cancer?

17 MR. LEITER: I'm going to object to that as vague.
18 What do you mean by "knowledge"?

19 BY MR. GOLDSTEIN:

20 Q Okay.

21 Are you aware whether there's any cases other
22 than this one in which there's a lawsuit against Philip
23 Morris?

24 A I -- I can't tell you whether or not it's
25 Philip Morris per se. I listen to NPR. I hear about the
58

1 results of -- I heard about the results of the Florida
2 case, just that there was a big case in Florida. I have
3 several affidavits I've read, but quite frankly, I don't
4 look at the front and figure out who all the players are.
5 I was just concerned of -- about, you know, what is that
6 testimony? What happens in a deposition? What are the
7 types of questions that are asked?

8 Q Uh-huh.

9 Have you ever gone outside of the Debevoise and
10 Plimpton firm to independently look and see whether these
11 guys are giving you the right stuff? In other words, how
12 do you know, as you sit here today, that there might not be
13 some very powerful documents out there that are extremely
14 critical and pervasive that you haven't been given access
15 to?

16 A I would assume that you would bring those
17 documents up.
18 Q Well in terms of your reports -- I'm wondering
19 in terms of your reports, you know, your study that you've
20 done, if you want to be thorough, was that one -- that was
21 one of your objectives, wasn't it, to come up with a
22 definitive, thorough opinion about CTR's work?
23 A We hate to use the term "definitive." Let
24 me --
25 Q Let's use a synonym, then.

59

1 A Let me put it this way: When we get ready to
2 publish a paper which might be similar to doing a
3 deposition, is -- what I tell my students is that the data,
4 you can't go back and revise your data. You can revise
5 your conclusions if new data comes in.
6 If the data doesn't provide you with all the
7 answers, and there are still things that you don't
8 understand, then we write in the discussion, the following
9 three aspects. We don't have an explanation. We point out
10 that we don't know that. And oftentimes, what happens in
11 the next paper is, that with new data, then those three
12 things that we didn't understand, all of a sudden, ah, of
13 course, it fits together like that.
14 And so when you say "definitive," in the course
15 of my readings, all of -- all of this, that, you know, I'm
16 always asking, you know, does everything fit? Does
17 everything fit? Does everything fit? And we're taught
18 when we do scientific research, is that you always take the
19 most simple route, the simplest explanation, if you hear
20 hoofbeats and you're in New York City, it's likely to be a
21 horse, not a zebra. And --

22 Q Unless you're at the zoo.

23 A Unless you're at the zoo. But that --
24 that's -- so when you ask me, "Are there other bits of
25 information out there," I can't tell you, "Oh, no, there
60

1 aren't any bits." But I can tell you that having read the
2 annual -- the annual reports, having read the SAB minutes,
3 from my personal experiences, from what they did within the
4 context of the science at the time, everything fits.
5 Now, if you were to bring me a stack of papers
6 saying that all of this was fabricated, all the reports
7 that he gave me, all the applications were fabricated, then
8 that changes the data setting. And that would cause me to
9 change my opinion. But for example, when I look at the
10 applications, both reviewed -- the funded and nonfunded
11 applications from, say 1977, I see applications that I
12 actually saw separately from what Mr. Michaels gave me
13 because those are the applications that -- for example, of
14 Dr. Linda Hall, and I was in her lab; and so I saw it from
15 the other side.

16 Q Could you explain for me when you go to look
17 through these various documents --

18 A Uh-huh.

19 Q -- if I was your daughter, I guess, maybe
20 that's the best way to get to it, and she -- she sees you
21 with a stack of stuff from New York and she says, "Mommy,
22 what are you looking in there," tell me what you would be
23 looking for.

24 MR. LEITER: I'm going to object. What documents
25 are we talking about?

61

1 MR. GOLDSTEIN: Good point.
2 Q When you are doing your investigational reading
3 for your study and you're looking at any of the documents
4 that are on that sheet, you probably may not know what's
5 stated in there when you open up the box or the package.
6 Can you go through and tell me what your mental
7 processes, what you're looking for when you review -- when
8 you've reviewed these documents on a sheet, and it's
9 different for some versus another, please clarify.
10 MR. LEITER: I'm going to object to the question as
11 vague and overbroad.
12 BY MR. GOLDSTEIN:
13 Q Go ahead.
14 A Yes, that's a very broad question. First of
15 all, when you indicate a stack of documents, you've got
16 maybe six or seven inches. You have to realize that my
17 entire study has been taken over by documents. I have an
18 entire wall of volumes of material.
19 Q Okay.
20 I didn't mean to trivialize or in any way
21 minimize the quantity.
22 What I mean to say is --
23 A So -- so --
24 Q Let me just change it a little bit so we have
25 it very clear.
62
1 I would like to know when you review documents
2 in connection with your study for CTR, what is it you start
3 out looking for when you start reading a particular piece
4 of material?
5 (Ms. Tang exits the proceedings.)
6 MR. LEITER: I'm going to object. Again, vague and
7 overbroad.
8 Are you talking collectively about scientific
9 articles? Documents from the companies? Newspaper
10 articles?
11 BY MR. GOLDSTEIN:
12 Q I want to know when she reviews -- let me ask
13 it this way: When you review, let's say, internal letters
14 back and forth, are you trying to determine you first see
15 what's going on, you read the contents, and is it with a
16 particular eye towards looking for something or another?
17 MR. LEITER: Same objection.
18 You can answer.
19 THE WITNESS: The first thing I do is, I figure out
20 what the date is. It makes a big difference if it's a '54,
21 '64, '75, so I look at the date. I try to figure out who
22 are the players, who are these individuals, and I look to
23 see what they're saying, and as -- when is the context, you
24 know, what other things were going on at that time?
25 Another example perhaps to try to answer your
63
1 question is, as I'm reviewing the annual reports, I see
2 that their funding research which has to do with
3 monooxygenasis, an enzyme, I'm -- I'm looking at this, and
4 from the -- from the abstract, it's maybe a little
5 difficult for me to figure out exactly how does this fit in
6 to aspects of cancer?
7 I turn around, and I pull out my other books;
8 and I sit down, and I ask, "What are monooxygenasis? What
9 do they do? Why are they important," and then go, "Oh,
10 wow." These are the enzymes which were involved in
11 breaking down things like benzopyrene. Why are they called

12 monooxygenasis?
13 They use oxygen to open up these rings, so I
14 set that aside. I find that later in my reading that we
15 now know that people who are susceptible to cancers have a
16 particular form of these monooxygenasis, and so now
17 everything's sort of falling -- falling into place.
18 These guys back in the 60's and 70's had enough
19 foresight to realize this would be a good thing to study,
20 these monooxygenasis? Little always thought there was a
21 genetic component, and in fact, the guy was right. And
22 with the genoproject just now published, there is the
23 potential that people can have -- you can monitor, you can
24 look at their particular DNA sequences for particular
25 genes, and you're going to have very, very strong
64

1 predictors about who is going to be susceptible to various
2 forms of cancer.

3 Our modern medicine now is amazing. These guys
4 back in the 50's and 60s had enough sense to really push
5 for tissue culture, had enough sense to develop pure
6 genetic lines of mice, were funding things that perhaps the
7 layperson, they kind of go, "Well, that's a silly thing to
8 be funding." They're just funding anything they want. But,
9 in fact, there's a lot of insight. And now a lot of this
10 information is now being borne out in the 90's that these
11 guys were right.

12 BY MR. GOLDSTEIN:

13 Q Okay.

14 Now, let me ask you -- I have no doubt of the
15 various projects that were undertaken by CTR. I'm sure
16 that a lot of them make a tremendous amount of sense to
17 you.

18 A Okay.

19 Q Maybe not to the rest of us, or maybe I'm just
20 alone. But they were undertaking scientific research
21 projects, but that wasn't the charge or the theme of your
22 study, was it? To see whether it was, whether they were
23 actually doing something as opposed to junk science?

24 (Mr. Carlson exits the proceedings.)

25 MR. LEITER: I'm going to object to the form.

65

1 You can answer.

2 THE WITNESS: What was my charge?

3 BY MR. GOLDSTEIN:

4 Q Right.

5 A My charge was to review and look at the
6 activities of CTR and CTR-related activities and so very
7 many opinions about it. So yes, the type of science they
8 funded, the type of science they funded at particular
9 times, in which decade.

10 Q Uh-huh.

11 A The relevance of that science to smoking and
12 health issues, all of that would be very important in
13 developing opinions about CTR's activities and related
14 activities.

15 Q Do you have an idea -- as you sit here today,
16 you don't know the -- the total number of people that
17 worked at CTR at any time that you studied it, okay?

18 A The total number, certainly, I don't.

19 Q I mean, can you -- can you quantify for me. I
20 mean, was it \$100,000,000 research undertaking per year or
21 a billion, or do you have any parameters at all as to how
22 big an undertaking CTR was?

23 MR. LEITER: I'm going to object to the question.
24 You started asking about people, and then you switched to
25 dollars.
66
1 MR. GOLDSTEIN: I'm sorry. I'm going to go to
2 dollars.
3 MR. LEITER: Okay.
4 Why don't you restate the question so that we
5 understand it?
6 BY MR. GOLDSTEIN:
7 Q Do you have an approximate understanding? Do
8 you have any idea --
9 I just want to know if you can tell any -- at
10 any point in time since 1954 to '97, at what level was CTR
11 funding investigative science projects?
12 A Well, CTR in terms of their grants and aids
13 funded approximately \$302 million worth of research. They
14 funded approximately \$13 million in contract research and
15 about 18 million in special projects.
16 Q Over what period of time?
17 A That's the whole program.
18 Q Oh.
19 A From 5- -- from the time they started until
20 '94 -- '97.
21 Q Okay.
22 Is it your understanding that at any time CTR
23 was trying to find a cure for cancer?
24 A That was not CTR's charge.
25 Q Okay.
67
1 What was their charge, you can tell me?
2 A Their charge was to investigate issues of
3 smoking and health.
4 Q Is there a -- any kind of summaries or year-end
5 reports that were published by CTR that indicated what
6 their findings were for the prior year?
7 MR. LEITER: What CTR's findings were?
8 MR. GOLDSTEIN: Right.
9 MR. LEITER: I'm going to object to the form.
10 THE WITNESS: Those were the annual reports.
11 BY MR. GOLDSTEIN:
12 Q Okay.
13 MR. LEITER: Just to be clear, you mean the findings
14 of researchers funded by CTR?
15 MR. GOLDSTEIN: To be precise, yes.
16 Q Have you read the 1997 annual report of CTR?
17 A I've reviewed all the annual reports.
18 Q So the numbers you gave me, the 302 million,
19 that was over a 43-year period?
20 A Is that right? I --
21 Q 4- -- maybe not. Yeah.
22 A '54 --
23 Q '54 to '97?
24 A '97, yeah.
25 Q Did you ever hear anything to the effect that
68
1 CTR -- strike that.
2 In any of the materials that you reviewed that
3 were critical of CTR, did you ever see anything in there
4 that suggested that their areas that they purposely stayed
5 away from their research?
6 A Who was staying away from?
7 Q That CTR was staying away from. Like for

8 example, lung cancer that they didn't undertake an
9 investigation of causes of lung cancer?
10 MR. LEITER: I'm going to object to the form.
11 You can answer.
12 THE WITNESS: Could you repeat the question?
13 BY MR. GOLDSTEIN:
14 Q In your study, did you come across any evidence
15 that CTR had funded any kind of research on the causes of
16 lung cancer?
17 A CTR funded research to understand the biology
18 of lung cancer.
19 Q How many tobacco companies had contributed to
20 CTR, if you know?
21 A I don't know.
22 Q It was obviously more than one?
23 A I think it was all of them, but I couldn't cite
24 to you each one that was involved. I think there was one
25 company that initially wasn't involved, and then later,
69
1 they joined in.
2 Q Which one was the late comer, do you know?
3 A I don't remember.
4 Q Okay.
5 What -- why was CTR funded, if you know? I'm
6 sorry. Formed. I'm getting tired.
7 Why was it formed?
8 A Why was it formed?
9 Q Yes.
10 MR. LEITER: I'm going to object. It calls for
11 speculation.
12 BY MR. GOLDSTEIN:
13 Q Do you have an understanding as to what the
14 process was that -- under which CTR was created?
15 MR. LEITER: Object to the form.
16 THE WITNESS: In the 1950's, there already had been
17 called that the tobacco companies should take the
18 opportunity to fund basic biomedical research -- and that
19 call came out in a "New England Journal of Medicine"
20 article, review article -- so the ideas about having some
21 sort of organization in which the tobacco companies could
22 funnel money to provide basic funds for basic research,
23 those ideas had been kicking around for a while. Wynder
24 had also suggested to the Attorney General that, in fact,
25 some sort of institution of that sort should be -- should
70
1 be put together.
2 BY MR. GOLDSTEIN:
3 Q Okay.
4 So if I understand correctly, your -- the
5 essence of your testimony, according to the designation of
6 experts that I read earlier today, was that you're going to
7 testify as to the "bona fideness" or the "bona fides" of
8 CTR's research; is that correct?
9 MR. LEITER: I'm going -- I'm going to object to the
10 question. She's testified about a number of opinions, and
11 you're mischaracterizing to suggest one essence of her
12 testimony.
13 MR. GOLDSTEIN: Okay. Fine.
14 Q Have you told me this morning the opinions that
15 you hold on CTR?
16 A Some of the opinions.
17 Q Okay.
18 Can you tell me any more, any others that you

19 have?

20 A How long do we want to be here?

21 Q Well, you're getting paid, so feel free.

22 A It would -- it would help me if you could ask
23 me specifics.

24 Q Well, why don't you tell me --

25 A Specifics.

71

1 Q What other discussions did you have with any
2 attorneys prior to your deposition about your prospective
3 deposition testimony? In other words, did you go over
4 questions and answers that you might be asked at the
5 deposition?

6 A We talked about some possible questions --

7 Q Okay.

8 A -- and basically, there are questions that I
9 was told to think about it, yeah.

10 Q Okay.

11 In the event that they asked better questions
12 than I do, can you recall what some of those questions
13 were?

14 A You know, what was CTR's research program? Did
15 it have any relevance to understanding cancer?

16 Q Okay.

17 And your answer to that would be?

18 A Do you want the long answer or the short
19 answer?

20 Q Well, why don't you tell me what you discussed
21 yesterday?

22 A We didn't -- we didn't discuss that particular
23 question yesterday.

24 Q Well, whenever was discussed.

25 When you gave -- were given sample questions

72

1 and gave sample answers, can you tell me what your sample
2 answer was that to that question whenever you gave it?

3 A Well, that -- that particular -- leads into
4 trying to understand the rationale behind CTR's entire
5 research program and to be able to understand that research
6 program one has to have an understanding of -- in terms of
7 my expertise, the understanding of cancer and the biology
8 of cancer which means, then, that one has to understand
9 that cancer is not a single gene -- gene mistake and, boom,
10 you have cancer, but the cancer is actually a very
11 complicated process which ultimately leads to having to
12 knock out several different genes.

13 Once those genes are knocked out, then cells
14 are able to -- to differentiate. Those cells then had the
15 potential to undergo cell division. If other events occur,
16 other external stimulus, those cells can now divide, and
17 eventually you get the formation of tumors.

18 Now, CTR funded a lot of the research in trying
19 to understand what is the biology of lungs, heart to be --
20 to be able to understand then, how are these particular
21 cells formed? Once we understand how you can form a little
22 tumor, and tumors basically don't get much bigger than the
23 end of this -- this pencil, this eraser, but the way that
24 you get metastasis is the fact that those tumors have to be
25 vascularized; that is, little capillaries have to come in

73

1 and grow around those tumors and CTR funded a lot of
2 research understanding that process, the vascularization.

3 So if you look at a particular report saying

4 epidermal growth factors involved in vascularization,
5 there's nothing that says tobacco in there. There's
6 nothing that says lung cancer, but that understanding is
7 going to be critical in understanding the biology of lung
8 cancer, so once you get vascularization occurring, that
9 little tumor then can grow larger and larger.
10 And the other events that occur which perhaps
11 some of those cells can break off, but they have to be able
12 to now get into the bloodstream. To get into the
13 bloodstream, they have to sort of saddle along these other
14 cells to get through the cell and so there's cell to cell
15 unification that goes on.
16 Once they get into the bloodstream, our body
17 has all sorts of mechanism to try to get rid of these,
18 quote, unquote, "cells." The immune system comes into
19 place. CTR funded a lot of the biology to understand that,
20 out of capillaries and back into another position to form
21 new tumors.
22 In order to understand that, we need to again
23 understand how cells talking to each other, how do they
24 know they're not both the same or different? And CTR
25 funded a lot of that research.

74

1 Q Now, let me ask you, having spent as much time
2 as you have reviewing materials on CTR, have you reviewed
3 any documents that suggest that CTR was funded to try to
4 help the public in terms of finding an ultimate cure for
5 cancer?

6 A CTR was charged to look at tobacco and health
7 issues. Now, a fallout of those types of studies will be
8 information which has been very important in helping the
9 biomedical community and ultimately helping the patient.

10 Q Do you know whether any of the research that
11 CTR did has ultimately gone into the private community or
12 private sector to benefit people?

13 A In terms of therapy?

14 MR. LEITER: I'm going to object to the question as
15 vague.

16 BY MR. GOLDSTEIN:

17 Q Well, not just limited to therapy, but has
18 anything that you can point to that CTR has undertaken has
19 resulted in any major medical advances in the private
20 sector?

21 MR. LEITER: Objection. It's vague, and it's
22 overbroad.

23 BY MR. GOLDSTEIN:

24 Q Okay.

25 Other than that, if you know, you can answer.

75

1 A What do you mean by the "private sector"?

2 Q Outside of CTR, has -- can you point to
3 anything that concrete that you can say, "Well, you know,
4 CTR's done great work, and the work that they did -- was --
5 here's evidence of it"?

6 Can you point to anything that shows whatever
7 work they did within CTR has advanced medicine in a
8 particular area?

9 MR. LEITER: Same objection. It's vague, and it's
10 overbroad.

11 THE WITNESS: Gosh, yes.

12 BY MR. GOLDSTEIN:

13 Q Okay. Tell me.

14 A Harrell Varmus, Nobel Prize winner works on

15 "occuscenes" scenes was funded by CTR.
16 Q Can you spell his name, please?
17 A V-a-r-m-u-s.
18 Q Okay.
19 A Michael Karin, Peter Vogt, both worked on gene
20 and Vogt. Two critical transcription factors which are
21 involved in development of cancer. In addition, though,
22 just the whole time function of "vene and vos" provides us
23 with some of the very first paradigmes in understanding how
24 the genes are regulated.
25 Q Okay.
76
1 MR. LEITER: Just to be clear, are you asking for
2 examples? You asking for an exhaustive list as much as she
3 can remember today?
4 MR. GOLDSTEIN: Yeah, in, you know, of others.
5 THE WITNESS: I'm just going to give you examples,
6 and if you want an exhaustive list, we can sit with the
7 annual reports and go through each and every abstract, and
8 I can tell you where things have gone.
9 For example, they've also funded people who are
10 looking at signaling; that is, how does an external cue
11 ultimately -- ultimately turns on genes within the nucleus.
12 And we know that gene regulation is a critical aspect in
13 looking at -- at cancer. They funded research on -- on
14 genes which are involved in the phenomenon called "cell
15 death" or apoptosis, and apoptosis is where cells undergo
16 programmed cell death.
17 So this is the normal death process of cells.
18 And one of the interesting things about cancer cells is
19 that they no longer are -- they no longer express the genes
20 which trigger the apoptotic process. So it's part of what
21 allows these cells to continue to divide and to divide and
22 to divide.
23 And so they've done critical work in looking at
24 apoptosis. The particular genes are involved that is
25 important not only in cancer, but it's important in our
77
1 basic understanding of how organisms develop. The way that
2 we get fingers have to do with the fact that there used to
3 be cells in here, and those cells underwent program cell
4 death. So they also did a lot of work in terms of
5 understanding cancer. You have to also understand
6 development, the development processes.
7 BY MR. GOLDSTEIN:
8 Q Let me ask you this: You were hired -- as you
9 sit here today, do you have an understanding as to who it
10 is you're testifying for?
11 A I know that Mr. Leiter has been retained by
12 Philip Morris.
13 Q And who is going to be paying for the
14 services -- let's say the preparation that you spent for
15 the deposition today, who do you intend to bill for that?
16 A I was told that I should bill Mr. Leiter.
17 MR. LEITER: What?
18 THE WITNESS: Actually, Angela. But --
19 BY MR. GOLDSTEIN:
20 Q Okay.
21 How much do you charge for your time in
22 reviewing documents?
23 A \$300 an hour.
24 Q And how much for your -- for the time you've
25 been working for Mr. Michaels, at what rate are you

78

1 compensated for that?

2 A At \$300 an hour.

3 Q Okay. All right.

4 How many hours have you spent in preparation

5 for this deposition?

6 A In terms of reviewing all of CTR's documents or

7 specifically for this deposition?

8 Q Well, specifically for this deposition, yeah.

9 A Oh, maybe about 20 -- 20 hours prior to getting

10 here.

11 Q Okay.

12 And how was that time spent?

13 A That -- those 20 hours were spent in discussion

14 with Mr. Michaels.

15 Q Okay.

16 Where did that take place?

17 A That took place at the Embassy Suites --

18 Q And --

19 A -- in Las Vegas.

20 Q Okay.

21 And when did that happen? When were you

22 pre- -- when did that occur?

23 A During January and February.

24 Q Okay.

25 On one visit or more than one?

79

1 A Multiple visits.

2 Q How many visits do you -- did you meet him?

3 A Maybe three or four visits. I'm not sure.

4 Q Independent trips made from wherever he came

5 from?

6 A Yes.

7 Q And how long were the visits that you -- how

8 long did you spend with him on each visit?

9 A Oh, a couple of hours.

10 Q And what was done on, let's say, the first of

11 those meetings?

12 A In January, we -- we met with Mr. Leiter and

13 with Ms. Amy -- I've forgotten Amy's last name -- another

14 lawyer from Arnold and Porter.

15 Q Okay.

16 A And -- and that was to introduce me to them and

17 for them to meet me and discuss whether or not I was

18 interested in being an expert witness on CTR and

19 CTR-related activities.

20 Q Where -- where did that meeting take place?

21 A The Embassy Suites.

22 Q Okay.

23 And that was with respect to just this case?

24 A Yes.

25 Q Okay.

80

1 And what was said and by whom in that meeting?

2 A I can't -- I don't have that meeting memorized.

3 Q No, I understand. I just want to know in

4 substance or effect other than, "Are you willing to

5 testify," you know --

6 A We talked -- we talked about what -- they asked

7 me what my opinions were of CTR. I mean, not what are your

8 opinions of CTR, but rather how did -- how did CTR's

9 program fit into research being -- being done at that time?

10 How does, you know -- does CTR's program have anything to

11 do with lung cancer or cancer in general? We discussed
12 what my qualifications were.
13 Q Wait. I have to object. No, let's go back to
14 your first question about what was your beliefs in terms of
15 CTR, you said it more accurately -- more eloquently than I
16 did.
17 But what was your response to their questions
18 on the subject of CTR?
19 A Depending on their questions, I provided them
20 with this whole series of different opinions about CTR, but
21 it mainly centered around CTR and CTR's role in cancer
22 research.
23 Q I take it that probably was a less formal
24 meeting than here. You probably didn't have a court
25 reporter present. It was probably a very friendly meeting,
81
1 although we're very friendly here today.
2 Could you just summarize for me what you said
3 to them in response to his initial question?
4 A It was basically the same response I gave --
5 gave you in describing the process of cancer and where in
6 that very long process CTR's research, CTR-funded research
7 fit into -- into the cancer process.
8 Q Okay.
9 Have you studied any other organizations other
10 than CTR? I should say in the same fashion that you
11 studied CTR?
12 A No.
13 MR. LEITER: I'm going to object to the question
14 belatedly.
15 THE WITNESS: No, I haven't.
16 BY MR. GOLDSTEIN:
17 Q Okay.
18 Have you been given any other projects to
19 research by any other lawyers?
20 A Other than Mr. Michaels and Arnold and Porter
21 lawyers?
22 Q Right.
23 A No, I haven't.
24 Q Okay.
25 And other than the research on CTR that we've
82
1 talked about, have either of those firms given you anything
2 else to research?
3 A I mean, outside CTR and CTR-related activities
4 and all of that?
5 Q Right.
6 A No, they haven't.
7 Q Anything different for any other case other
8 than this case?
9 MR. LEITER: Objection.
10 MR. GOLDSTEIN: I'll rephrase.
11 MR. LEITER: Please.
12 MR. GOLDSTEIN: Getting informal here.
13 MR. LEITER: Right.
14 BY MR. GOLDSTEIN:
15 Q Have you been retained to render an opinion on
16 any other cases other than this case?
17 A No, I haven't been retained to render opinions
18 on any other cases.
19 Q Okay.
20 Have you discussed with them the possibility
21 that you may discuss in any other case other than the

22 Boeken case?
23 A Oh, no.
24 Q Okay.
25 How many different bills do you think you've
83
1 submitted since 1998 to the Debevoise and Plimpton firm?
2 A Maybe four or five.
3 Q Okay.
4 A I -- I am unsure about that number. That's a
5 ballpark.
6 Q Okay.
7 And when you submitted those bills, it's
8 usually in writing?
9 A Yes.
10 Q Okay.
11 And have you submitted any bills to the Arnold
12 and Porter firm?
13 A Recently, yes, I have.
14 Q And how much was that for?
15 A I believe it was for 8,000.
16 Q And that was for what period of time?
17 A That was for January.
18 Q Okay.
19 Now, in terms of the merge of compensation that
20 you derive overall -- I don't want to -- I mean, I probably
21 do want to ask, but I won't be so undelicate, but is it
22 true that with respect to the work on this case that you're
23 doing that it's going to comprise close to half of your
24 salary for the year? In other words, your total income
25 approximately half or more maybe derived from this case,
84
1 from working this case?
2 MR. LEITER: For calendar year 2001?
3 MR. GOLDSTEIN: Yes.
4 THE WITNESS: Likely.
5 BY MR. GOLDSTEIN:
6 Q Oh, okay. All right.
7 Is there any -- any place you're aware that
8 there's a posting publicly of the salary you received?
9 A It's called a gray book, and it can be accessed
10 through, I believe, the UNLV web page.
11 Q Okay.
12 Well, since it is published, I don't want to be
13 indelicate and not ask about your age or salary, but I'll
14 digress just to ask about your salary, if I may.
15 What is your annual salary there?
16 A I'm embarrassed to say that my sister does all
17 my finances, and I'm very bad about keeping track of money.
18 I think my salary is around 58-, but I'm not sure.
19 Q Okay.
20 We won't tell her that, okay.
21 In terms of the -- now, am I correct that you
22 spent about 20 hours with Mr. Michaels discussing the
23 preparation of this deposition; right?
24 A Yes.
25 Q Okay.
85
1 I don't want to spend 207 hours having you
2 recount to me what it was that you discussed, but I assume
3 that most of the time you spent on those 20 hours was spent
4 in discussions as opposed to awkward silence; correct?
5 A Correct.
6 MR. LEITER: Can I inquire as to the basis for that

7 assumption?
8 BY MR. GOLDSTEIN:
9 Q Well, he seems like an articulate fellow. She
10 certainly is.
11 A Mind you part of that time, I might be
12 reviewing other materials that he's been -- presented to
13 me.
14 Q Sure.
15 A And he's --
16 Q I understand.
17 A On conference calls.
18 Q I understand.
19 What was the next subject that you recall
20 having discussed with him in preparation for your
21 deposition of things you might be asked to express? And
22 again, I'll just tell you that it's probably the easiest
23 way to ask you without drawing an objection from your
24 counsel, I know you think it's just underhanded for me to
25 ask, but it's a perfectly fair question in my view.
86
1 A Oh, the question's not a problem.
2 Q Okay.
3 A It's very -- it's very broad. I mean, you have
4 asked in preparation for this deposition and some of this
5 stuff that we discuss is not really in preparation for this
6 deposition per se, and that's why I hesitate --
7 Q Okay.
8 A -- when you ask these questions.
9 Q Well, let's just go over, let's say hour number
10 two of your discussion --
11 A Oh, please.
12 Q No, I don't want to get into specifics like
13 that. But I'd like you to just take me through a few more
14 of the subjects that you discussed with him generally.
15 A Okay. For example, I've read in various
16 different places about Freddy Homburger and we -- he was
17 able to provide me with a consolidation of memos having to
18 do with Freddy.
19 Q Now, who is Freddy Homburger?
20 A Freddy Homburger was a CTR grantee.
21 Q And what was the significance of your -- what
22 was the subject of your discussion about Freddy Homburger?
23 A Freddy Homburger, he was one of the original
24 people involved in trying to develop an animal model, and
25 we were discussing his particular results and --
87
1 Q What did you say about that?
2 A Oh, his -- he was very interested in developing
3 a golden Syrian hamsters as an animal model.
4 Q As am I, but go ahead.
5 A And -- and the fact is that those hamsters were
6 not -- were not a suitable animal model. He could never
7 get lung cancer to occur in these -- in these animal
8 models. And I mean, that was based on information that
9 both I had read in, I believe it was, in the -- one of the
10 reports in the Surgeon General, and also this were concerns
11 and also reading Freddy's published articles on the topic.
12 Q Uh-huh.
13 Why does the golden Syrian hamster study have
14 particular relevance here in this case, if you know?
15 MR. LEITER: I'm going to object to that. It calls
16 for speculation.
17 MR. GOLDSTEIN: Okay.

18 MR. LEITER: Calls for a legal opinion.
19 MR. GOLDSTEIN: Okay.
20 Q What -- what about the golden Syrian hamsters
21 did you and Mr. Michaels discuss at the Embassy Suites?
22 MR. LEITER: Objection. Asked and answered.
23 BY MR. GOLDSTEIN:
24 Q Other than what you've already said. I mean,
25 what I want to know is, I -- I really don't want to have a
88
1 chapter and verse on the hamster or on Mr. Michaels. I
2 would simply want to know why would that be a subject that
3 you would review in preparation for your deposition here?
4 MR. LEITER: Again, calls for speculation and object
5 to the form.
6 BY MR. GOLDSTEIN:
7 Q Okay.
8 Go ahead.
9 A The hamster was only the start of -- of our
10 general discussions about the inhalation studies. So we
11 went from Homburger's studies from there to micro- --
12 Microbiological Associations, Inc., or MAI and their
13 particular studies and the frustration that I think was
14 felt in the scientific community in not being able to
15 develop an animal model.
16 I mean, after 10,000 mice and still not being
17 able to get this work, it pretty much says that if you want
18 a career in science, this is not the research project you
19 should pick up. So it's just going through that particular
20 progression. I mean, most --
21 Q Okay.
22 A -- of our discussions were more peripheral
23 to -- in this particular case.
24 It's just having me be familiar with not only
25 CTR, but then also all of the CTR-represented activities.
89
1 Q In other words, basically prepare you in case I
2 asked you some hamster questions. I mean, I really -- I
3 don't understand.
4 MR. LEITER: I'm going to object to the form.
5 BY MR. GOLDSTEIN:
6 Q Okay. Well, I don't -- okay.
7 Other than what's the next thing that you and
8 he discussed, if you can recall, generally?
9 A We discussed what is a deposition. I don't --
10 Q Okay.
11 A I don't hang out with lawyers, and so all of
12 this is very new to me.
13 Q Okay.
14 A We talked about the mechanisms. We discussed
15 whether we were going to leave, what was going to happen,
16 concerns about who was going to watch my daughter while we
17 were gone.
18 Q Did they facilitate somebody to do that?
19 A I took care of that.
20 Q Oh, okay.
21 Any other --
22 A We reviewed, went back and looked at some --
23 some of the information in the Surgeon General's reports.
24 Q Which years?
25 A I have in my possession '64, '82 and '88.
90
1 Q Okay.
2 A I had asked him -- I had gotten some soft

3 numbers from the report in concerning how many smokers
4 don't develop lung cancer, and I wanted to know whether or
5 not he had any additional information that is other
6 refereed reports that would provide me with those numbers.

7 Q Do you know -- are you -- is she going to be
8 here to testify about those issues, about the numbers of --
9 I mean, I thought it was CTR primarily.

10 MR. LEITER: I'm not sure I understand what your
11 question is.

12 MR. GOLDSTEIN: Well, I didn't want to -- why don't
13 we go off the record for one second?

14 (An off-the-record discussion was held.)

15 MR. GOLDSTEIN: Back on the record.

16 Q Just so that I have it clear, Doctor, you're
17 not going to be testifying as an expert in terms of
18 causation of lung cancer; correct?

19 A Correct.

20 Q Okay.

21 But in terms of your investigation of CTR, did
22 it cause you to consider some other statistical evidence as
23 to the previous chance of lung cancer in the smoking
24 population?

25 A Yes, it did.

91

1 Q And can you tell me what materials you -- first
2 of all, what is your opinion with respect to that -- on
3 that issue?

4 A Well, in reading the -- one of the Surgeon
5 General reports, it became very obvious that I wanted to
6 know what the exact numbers were of how many heavy smokers
7 do not develop lung cancer, and that becomes important
8 because in the 50's, looking at those epidemiological
9 studies.

10 Again, epidemiological studies provides an
11 indication of something that might be going on, but in view
12 of that and then the lack of an animal model and the fact
13 that 85 percent of the people, 90 percent, depending on --
14 on what numbers you look at; and there are various numbers
15 for various years listed in the Surgeon General's report.
16 Why is it that these other people don't develop
17 lung cancer? Why is it predominantly heavy smokers don't
18 get lung cancer? So are we barking up the right tree by
19 saying it has to do with smoking, and that fits then in
20 back to what was understood back in the 50's and 60's, and
21 so these scientists who -- who felt that lung cancer was
22 not being caused by smoking, they were looking at the
23 scientific data.

24 If 85 percent of the people don't develop it,
25 are we really looking at the correct causation? Is it
92

1 having to do with smoking, or does it have to do with a
2 genetic predisposition? Does it have to do with other
3 aspects, perhaps occupation?

4 A variety of other issues, and so part of the
5 studies back in the 50's and 60's had to do with -- with
6 trying to figure out, are there other alternatives because
7 85 percent of the people don't get lung cancer.

8 Q And how do you know that?

9 A Numbers from the Surgeon General's report.

10 Q Which --

11 A Fact --

12 Q Which Surgeon General's report?

13 A I believe it's either the '64 or the '82. And

14 I'm giving you ballpark numbers because from the specific
15 numbers I came out with, I came out with 94 percent don't
16 get lung cancer. Part of it depends on how we categorize
17 smoking. Is it that, have you ever smoked a cigarette, or
18 are you a heavy smoker? So those numbers will be a little
19 soft, but they're all in the -- up in the 80 and
20 90 percent.

21 Q Okay.

22 Now, I said in a deposition yesterday in this
23 office with an expert --

24 A Uh-huh.

25 Q -- an expert for the other side testified that

93

1 two out of five people will die from smoking, and the other
2 three have adverse health effects from smoking.

3 Now, based on the information that you have in
4 your research, that would be news to you; right?

5 MR. LEITER: I'm going to object to the question as
6 assuming incomplete facts, vague and argumentative.

7 BY MR. GOLDSTEIN:

8 Q Okay.

9 Go ahead.

10 A I would need to understand how they came up
11 with those particular numbers, what they may have been
12 doing there was comparing that to --

13 MR. LEITER: You don't want to speculate. I'm
14 sorry. I don't want to interrupt. You don't want to
15 speculate as to what someone might have been doing.

16 THE WITNESS: Oh, I'm sorry.

17 BY MR. GOLDSTEIN:

18 Q Do you know how many deaths are attributable to
19 the deaths of lung cancer in the United States?

20 A I don't know.

21 Q Do you have any statistics for any period of
22 time of lung cancer deaths?

23 MR. LEITER: I'm going to object to the form. Her
24 own statistics? Somebody else's statistics?

25 BY MR. GOLDSTEIN:

94

1 Q What statistics exist that quantify the number
2 of deaths given to lung cancer in the United States in any
3 given year?

4 A I believe from the Surgeon General's report
5 which is where I got the numbers.

6 Q Okay. All right.

7 Let's go back to -- I'm sorry.

8 Let's go off the record for one minute.

9 (An off-the-record discussion was held.)

10 MR. GOLDSTEIN: Go back on.

11 Q Doctor, could you explain for me what your
12 belief is in terms of the relevance of the CTR data to
13 issues in this case?

14 MR. LEITER: Again, objection. You're asking for a
15 legal conclusion, and you're asking her to speculate.
16 She's offering opinions in the case. It's not for her to
17 judge what's legally relevant to the case.

18 BY MR. GOLDSTEIN:

19 Q Okay.

20 What do you believe is factually relevant
21 concerning -- no.

22 MR. LEITER: Same objection. Same objection.

23 MR. GOLDSTEIN: Okay.

24 MR. LEITER: She's asked to offer opinions. She's

25 offering opinions. It's up to the judge to decide what's
95

1 appropriate in this case.

2 MR. GOLDSTEIN: Okay.

3 MR. LEITER: And what's relevant to this case either

4 legally or factually.

5 MR. GOLDSTEIN: Okay.

6 Q Do you have an opinion as to the relevance of

7 the CTR research, other than what you've already testified

8 to, about causes of lung cancer?

9 MR. LEITER: I'm going to object to the question as

10 overbroad.

11 But you can answer, if you can.

12 THE WITNESS: Can you rephrase -- can you just

13 repeat the question?

14 MR. GOLDSTEIN: Could you repeat it, please?

15 (The record was read.)

16 MR. LEITER: I'm going to add a vagueness objection,

17 too.

18 MR. GOLDSTEIN: Thank you.

19 THE WITNESS: Much of CTR's research -- or we

20 shouldn't say "research" -- much of CTR's sponsored

21 research through the grant and aid program. Much of that

22 research has direct relevance in our understanding the

23 biology of lung cancer.

24 BY MR. GOLDSTEIN:

25 Q Were you ever told why it would be important

96

1 for someone like yourself to be hired to give an opinion in

2 a tobacco litigation?

3 MR. LEITER: Objection. Vague and object generally

4 to the form.

5 BY MR. GOLDSTEIN:

6 Q You can answer.

7 A I must be getting tired. What -- one more

8 time. One more time, please.

9 Q Did the thought ever cross your mind as to why

10 it was that CTR was interested in your opinions? Different

11 question.

12 MR. LEITER: Same -- different question. Same

13 objections. And calls for speculation.

14 BY MR. GOLDSTEIN:

15 Q Were you ever told?

16 A No.

17 Q Okay.

18 Did it ever occur to you, curious that lawyers

19 from New York would be hiring you at \$300 an hour to be

20 reading materials?

21 MR. LEITER: Same objections.

22 THE WITNESS: I was aware that there were

23 litigations going on, and I think I actually asked

24 Mr. Michaels why is it that CTR would be involved in this

25 litigation? It doesn't make sense to me. They were a

97

1 reputable funding agency. I got to publish whatever I

2 wanted. They behaved similarly to the National Institutes

3 of Health Funding agencies, the National Science Foundation

4 agencies. It didn't make sense to me why CTR would be

5 involved in these -- these litigations.

6 BY MR. GOLDSTEIN:

7 Q What'd he say?

8 A And he said to me that the gist of it is that

9 either the scientists were a bunch of bozos and weren't

10 doing any reasonable work, or the scientists were all very
11 good scientists; and CTR was just funding -- was not
12 being -- just funding research with no -- no direction or
13 goal to investigating problems in -- in health.

14 MR. LEITER: You understood that to be the gist of
15 the allegations?

16 THE WITNESS: Pardon?

17 MR. LEITER: You said Mr. Michaels said the gist of
18 it, the gist of the allegations that were being made?

19 THE WITNESS: Yes. Yes. The gist of the
20 allegations. I'm not very eloquent about stating it, but
21 that was the basic -- my basic understanding.

22 BY MR. GOLDSTEIN:

23 Q Is it he told that you people out there on the
24 plaintiff's side were leveling allegations that one of
25 those two things, either they were bozos or they didn't
98

1 know what they were doing?

2 A Something of that ilk, those general -- that
3 general idea.

4 Q Okay.

5 What did you say in response to that?

6 A I said, "That's nuts."

7 Q Why? Did you elaborate?

8 A Well, because, you know, my own personal
9 experience with the CTR was just that I view myself as a
10 very good scientist. I don't view myself as a bozo, and my
11 interactions with CTR were always very professional and
12 very cordial; and now having reviewed all of these
13 materials, they, in fact, I think, were very -- they had a
14 great deal of insight into the types of research which
15 would be most profitable in understanding these health
16 problems.

17 Q Beyond the bozo comment, because there are a
18 lot of bozos out there and a lot of people can say anything
19 they want, but why would it be important in a case -- no.
20 Let me rephrase it so you don't object.

21 Was anything further said to you about why CTR
22 was ever involved in any litigation? In other words, was
23 it alleged that they did things to hurt people?

24 A When we were having these conversations, the
25 gist of what I just told you is, basically all we've ever
99

1 discussed in terms of -- of CTR and the question's why
2 would CTR be involved in these -- these issues here?

3 Q Well, when does it usually get sued for being a
4 bozo? I mean, do you have an understanding, as you sit
5 here, based on anything that may have been told to you or
6 that you've seen as to whether CTR was named as a defendant
7 in any lawsuit for any reason?

8 MR. LEITER: Same objections. It's overbroad. It's
9 vague. And I -- I think you're asking her for her opinion
10 as to why plaintiff's lawyers include allegations about CTR
11 in a lawsuit, and I don't think she's the witness for that
12 question.

13 BY MR. GOLDSTEIN:

14 Q Well, if she has an understanding, having
15 reviewed various things that were critically said of CTR,
16 I'm just wondering if -- well, let me ask you this way:
17 Other than the materials that you've checked on page 8,
18 which were essentially communications within the tobacco
19 industry, are you aware of any other allegations critical
20 of CTR from the outside that anybody has made?

21 MR. LEITER: Objection. That's asked and answered.
22 MR. GOLDSTEIN: Sorry if I did. I apologize. Maybe
23 you could indulge me.
24 THE WITNESS: At the moment I -- I don't recall
25 any -- anything besides the internal memos and other things
100
1 that I may have been shown.
2 BY MR. GOLDSTEIN:
3 Q Okay.
4 Did you ever ask Mr. Michaels anything further
5 about these allegations that were made that, you know, some
6 people believe that people at CTR were either not
7 performing well or were bozos?
8 MR. LEITER: Objection. It's a vague question. And
9 I'm going to object to the characterization of her prior
10 answers.
11 MR. GOLDSTEIN: Okay.
12 It's only because I'm inept in asking that
13 particular question.
14 Q Can you recall anything further that was said
15 on the subject of allegations that some people have made
16 other than you've already testified to?
17 A No.
18 Q Okay. All right.
19 Other than the -- than the drosophila
20 studies -- am I pronouncing that correctly?
21 A Drosophila. Fruit flies.
22 Q That you'd said was \$90,000 -- well, why -- why
23 don't you tell me all the instances that you're aware of
24 that you participated in when you had been funded either
25 directly or indirectly through CTR projects? We went over
101
1 the 90,000 per year at the University of Illinois.
2 MR. LEITER: Just to be clear, you're asking whether
3 she's received any other grants from CTR?
4 BY MR. GOLDSTEIN:
5 Q Have you participated in other than Dr. Hall --
6 you talked about your participation under Dr. Hall.
7 A Uh-huh.
8 Q And you also talked about the \$90,000 per year
9 that was funded through the University of Illinois; right?
10 When you were at the University of Illinois -- correct?
11 A What -- let's --
12 Q Fruit flies investigation.
13 A What are you asking?
14 Q I want to know, were there any studies that you
15 participated in which funds were paid either to you -- paid
16 to you either directly or indirectly for any research?
17 MR. LEITER: From CTR?
18 MR. GOLDSTEIN: Yes.
19 THE WITNESS: I had two grants with CTR.
20 BY MR. GOLDSTEIN:
21 Q Uh-huh.
22 A Each was a three-year grant. And those grants
23 were from 1991 to '97. And that was the extent of my
24 funding from CTR.
25 Q Okay.
102
1 And how much were they -- were they the 90 each
2 year?
3 A Approximately 90 each year.
4 Q Okay.
5 So for those six years, 5- or 600,000 in that

6 relevance --
7 A 54,000 -- 540,000.
8 Q 540. And you received in each year about
9 \$5,000 a year compensation or --
10 A I think total I received 20-.
11 Q Okay.
12 How many other projects in number are you aware
13 of that existed -- let's say in the 1990's -- that were
14 funded, and I'm talking not dollar amount but number of
15 them through CTR? How many other projects?
16 A I could tell you how many for the whole
17 program. There were about -- they -- they funded
18 approximately 1,100 principal investigators.
19 Q Over the whole duration since '54?
20 A Yes.
21 Q Okay.
22 A So it would mean that the number of projects
23 would be somewhat larger than the -- than the 1,100 because
24 you can have different projects under the same principal
25 investigator.
103
1 Q But as you sit here today, can you tell me, for
2 example, during the years in which you were funded, how
3 many other such projects -- how many other people were
4 compensated in any way by CTR for doing investigational
5 research?
6 A They weren't compensated. I mean, these are
7 grants. The grants are actually awarded to the university
8 to carry out research. It's not -- the term compen- --
9 Q I don't mean to use it in a pejorative sense.
10 A Well, it's --
11 Q I just mean how many people -- how many
12 different projects was CTR funding in number in during the
13 years in which you were funded?
14 A I don't know.
15 Q Okay.
16 Can you tell me if it was more than 100?
17 A Yes.
18 Q And was it?
19 A Yes.
20 Q Was it more than 1,000?
21 A Per year?
22 Q Yes.
23 A For each year that I was funded.
24 Q Yes.
25 A Probably -- and I'm speculating here -- it was
104
1 probably about 300, maybe 500 projects per year. And that
2 is a guess.
3 Q Okay.
4 In the course of your investigation of CTR, did
5 you ever interview any of the other fundees, if you will?
6 MR. LEITER: Objection. Asked and answered.
7 You can answer it again.
8 MR. GOLDSTEIN: I'm sorry.
9 THE WITNESS: I know some of the other grantees.
10 I've never interviewed them in terms of having anything to
11 do with this deposition or my studies about CTR.
12 BY MR. GOLDSTEIN:
13 Q Okay.
14 And from everything you know from speaking with
15 other people, have they reported similar experiences to you
16 of CTR that you've had?

17 MR. LEITER: Objection. Vague.
18 THE WITNESS: Let me turn it around and say this:
19 That scientists tend to be extremely vocal, and of the
20 people that I knew who were funded by CTR, I never heard a
21 single complaint from any of them. And had there been any
22 issues, I certainly would have heard about it.
23 BY MR. GOLDSTEIN:
24 Q Okay.
25 MR. LEITER: Well, let me ask you generally. Before
105
1 you ask another question, I'm wondering whether it might be
2 a good time for a break.
3 MR. GOLDSTEIN: Let's take a break.
4 (A brief recess was taken.)
5 MR. GOLDSTEIN: Let's go back on.
6 Q Doctor, could you tell me what trial exhibits
7 you reviewed, if you can recall, in either the Henley case
8 or the State of Minnesota case?
9 A I've reviewed several -- I've read through
10 several testimonies, but I don't have them memorized as a
11 Henley case or the Minnesota case. I think I have
12 affidavits from Glenn La Sante and Macallister, and then I
13 also have I think a deposition from Opral; and I think I
14 have a testimony of Macallister, and I may have more. I'd
15 have to go back and look on my list.
16 Q Can you summarize briefly who those were about,
17 the things that you read?
18 A Certainly not.
19 Q Well, you could do better than I could.
20 MR. LEITER: I'm going to object. That's overbroad.
21 That's --
22 BY MR. GOLDSTEIN:
23 Q Well -- okay.
24 Can you tell me, if you can, what the Minnesota
25 case was about?
106
1 A No.
2 MR. LEITER: What the case was about?
3 BY MR. GOLDSTEIN:
4 Q Do you know anything about that case?
5 A No, I don't.
6 Q Okay.
7 And if I just show you this page, it's page 13
8 of -- I guess this is Exhibit 1 -- can you look at that and
9 just see if that refreshes your recollection at all as to
10 any of the things that you might have reviewed? What they
11 were about?
12 A Well, you know, I have all of these at home. I
13 don't have them marked down in terms of Henley versus
14 Philip Morris. So plaintiff's trial exhibits, I read
15 through these things in part to put into context the
16 information I was gathering because these are sworn
17 testimony. They were a good source of my being able to
18 find out who all the "Nobelaureates" were rather than my
19 having to do a medical line search to define all of the
20 laureates who was on the National Cast of Academy of
21 Science, and some of these things they have nicely
22 compiled. All the journals in which the articles, the
23 grant and aid-sponsored research articles, were -- excuse
24 me just one second.
25 THE WITNESS: Published.
107
1 (Mr. Piuze enters the proceedings.)

2 MR. LEITER: Does that mean we're going off the
3 record?
4 MR. GOLDSTEIN: Yeah, I'm sorry. Yeah.
5 MR. LEITER: Let's go off the record.
6 (A brief recess was taken.)
7 BY MR. GOLDSTEIN:
8 Q Doctor, when was it that you first became aware
9 that an enemy named Council for Tobacco Research existed?
10 MR. LEITER: Objection. Asked and answered.
11 BY MR. GOLDSTEIN:
12 Q Please refresh my recollection.
13 A When I was an undergraduate working with
14 Dr. Hall at MIT.
15 A No.
16 Q Where is Dr. Hall today?
17 A I believe Dr. Hall is the Director of
18 Neuropharmacology at a hospital in Sacramento.
19 Q Okay.
20 What was the name of the entity? I know we
21 went over several initials, but the name of the entity that
22 preceded CTR?
23 A Well, there was CTR, USA, Inc., and prior to
24 that it was CTRUSA. And then prior to that, it was TRR --
25 TIRC, Tobacco Institute Research Committee.
108
1 Q Okay.
2 Was there any formative document or documents
3 that you reviewed from TIRC in your research? You know
4 what I'm saying?
5 A I don't understand your question.
6 Q When a number of tobacco companies -- I believe
7 we went over the testimony briefly -- but most of the
8 tobacco companies ,except for one whose name you did not
9 recall participated in the initial formation of, I guess,
10 TIRC?
11 A Uh-huh.
12 Q Was there a document that you're aware of that
13 emanated from that formation? In other words, anything
14 that documented the formation --
15 A There's --
16 Q -- of TIRC?
17 A There's a -- the Frank statement or a Frank
18 statement.
19 Q What was the date of that, do you know?
20 A 1954, I believe.
21 Q And who's the author of that?
22 A I don't know.
23 Q And you've reviewed it?
24 A Yes, I have.
25 Q Is it listed in the materials here?
109
1 A It should be.
2 Q Okay.
3 And when -- when was it that you last reviewed
4 it?
5 A A couple of weeks ago.
6 Q Okay.
7 Can you summarize briefly what the Frank
8 statement stated?
9 MR. LEITER: I'm going to object. It's a well-known
10 document, and this is just a memory test to ask her to
11 summarize a document that's in plaintiff's possession.
12 MR. GOLDSTEIN: You may believe that it's well-known

13 to everybody, but myself -- and I really did have a good
14 faith reason for asking it, but --

15 MR. LEITER: Well, I'm going to object.

16 You can answer if you want, but I'm going to
17 object that it's essentially just a memory test.

18 BY MR. GOLDSTEIN:

19 Q Was it a document that contained signatures of
20 various participants in TIRC?

21 A It was a document which was the announcement of
22 the formation of -- of CTR or TIRC and the fact that their
23 goal was to investigate issues of cigarette smoke -- or
24 issues of smoking and health.

25 Q Uh-huh.

110

1 Is it your opinion at the time that this
2 organization was formed that there was a general consensus
3 in the scientific community that lung cancer was
4 attributable to or caused by cigarette smoke?

5 A Oh, it was not -- it was not established at
6 all. I mean, there's a great deal of -- of dispute in the
7 scientific community at that time.

8 Q And you base that on a number of the articles
9 that you've reviewed here?

10 A The articles that I've reviewed, my
11 understanding of what was known still in the mid-50's, and
12 it gets back again to epidemiology studies does not provide
13 you with a causal mechanism, the fact that the animal --
14 the initial animal studies was paint -- skin painting on
15 mice, that's very different from inhalation studies and
16 development of lung cancer.

17 Q Uh-huh.

18 A It has to do with the fact that the majority of
19 people who smoke don't develop lung cancer, so given those
20 three major bits of evidence and certainly there -- there's
21 likely other evidence, there was reasonable doubt that
22 smoking causes lung cancer.

23 Q Okay.

24 Now, that's doubt in the -- your understanding
25 about the general view of the scientific community to be
111

1 overbroad, but you're -- you're testifying not just about
2 your own personal opinions but about your understanding in
3 the scientific community as to where it had evolved at that
4 point; right?

5 A Right. Right, but that is the evidence -- the
6 main evidence -- not all the evidence, but the main
7 evidence, with which the science community would have based
8 its opinion.

9 Q That was in 1953 or '54?

10 A Well, this is in the 50's, the 50's and 60's.

11 Q Okay. Okay.

12 We already went over previously your view today
13 that you do believe that there's a -- a high degree or a
14 high correlation between smoking and developing -- and lung
15 cancer?

16 A Yes.

17 Q Okay.

18 When was it that you feel the scientific
19 community changed over from their views in the 50's to the
20 present view that you've adopted today?

21 A I'm not --

22 MR. LEITER: I'm going to object that you're mixing
23 apples and oranges.

24 MR. GOLDSTEIN: Let me lay a foundation.

25 MR. LEITER: You're asking -- okay.

112

1 BY MR. GOLDSTEIN:

2 Q Is it your belief today, your views, your
3 personal views also mirror as to the fact that lung cancer
4 is caused by cigarette smoking? Is that your belief that
5 that is a view in the main stream scientific community?

6 A Currently, yes.

7 Q Okay. Let's go back in time to, let's say

8 1990.

9 Was that also the view that you believe was
10 adopted in the general scientific community about the
11 causal effect between cigarette smoking and lung cancer?

12 A I would say probably within the 90's, the
13 majority of people in the scientific community felt that
14 there was enough correlative evidence to say that cigarette
15 smoking causes lung cancer.

16 Q Okay.

17 How about going back to the 80's? Same
18 question.

19 A I would say probably most, but I would also
20 believe that there were people who -- who didn't believe
21 in -- in causal mechanism between smoking and lung cancer.

22 Q And what about the 70's?

23 A Okay. In that number, just the number of
24 disbelievers would be proportionally larger in the 70's.

25 Q Do you have a percentage?

113

1 A No. No, I don't.

2 Q Today if you had to opine about the -- we could
3 probably agree that most people would agree the world isn't
4 flat.

5 How many people believe that lung cancer, that
6 cigarette smoking doesn't cause lung cancer?

7 MR. LEITER: Objection. Calls for speculation.

8 BY MR. GOLDSTEIN:

9 Q Would you have an opinion, as you sit here, as
10 to how prevalent a view it is that you -- you've described
11 the belief that lung cancer is caused by cigarette smoking,
12 and that's a view that's shared by most people in the
13 scientific community?

14 A Uh-huh. Yes.

15 Q Can you quantify the word "most" in present
16 day, as you sit here?

17 MR. LEITER: Without speculating.

18 THE WITNESS: No.

19 BY MR. GOLDSTEIN:

20 Q Okay.

21 Would you say -- can you be anymore specific?
22 In other words, more than half of the scientific community
23 believes that today that smoking causes lung cancer;
24 correct?

25 A Well, "most" by definition means more than

114

1 half.

2 Q Well, I want to make sure that we're on the
3 same par. How about 90 percent? Would you feel
4 comfortable with that, or is that still speculation on your
5 part?

6 MR. LEITER: Again. Calling for speculation.

7 THE WITNESS: It is speculation. I have not polled
8 scientists. I haven't polled ecologists, evolutionary

9 biologists, biomedical people.
10 BY MR. GOLDSTEIN:
11 Q You haven't really polled anybody with respect
12 to this study; right?
13 A Which study?
14 Q The study that you did on CTR?
15 A Polled them for what?
16 MR. LEITER: Objection.
17 THE WITNESS: Excuse me.
18 BY MR. GOLDSTEIN:
19 Q You're going through a list of people that you
20 haven't polled, and I just want to make sure that we
21 include, to be very clear about it, that you really, in
22 your investigational research, didn't pole anybody?
23 MR. LEITER: Objection. It's asked and answered.
24 It's overbroad, and it's vague.
25 BY MR. GOLDSTEIN:
115
1 Q You can go ahead and answer.
2 MR. LEITER: And it's argumentative. Excuse me.
3 MR. PIUZE: Is that a majority view?
4 MR. GOLDSTEIN: We could take a vote but, we dare
5 not.
6 Q Go ahead.
7 A Poll who for what? I --
8 Q You were talking about a number of different
9 scientific disciplines of people that you have not polled,
10 okay?
11 A Concerning --
12 Q Well, concerning this issue?
13 A Which issue are we now talking about?
14 Q Well, we're talking about the belief that
15 cigarette smoking causes lung cancer?
16 A Okay.
17 Q That was the response you gave me to that
18 question; right?
19 A Correct.
20 Q Okay.
21 And I merely wanted to clarify that if the work
22 that you've done for compensation for the Debevoise firm or
23 the Arnold and Porter firm that you conducted no polls of
24 any kind of individuals to conduct a survey?
25 MR. LEITER: About what?
116
1 MR. GOLDSTEIN: About anything.
2 MR. LEITER: Same objections. It's overbroad. It's
3 vague. It's argumentative. And I don't understand it.
4 Beyond that, you can answer.
5 BY MR. GOLDSTEIN:
6 Q Just to be clear -- just to be clear, the
7 opinions that you've expressed here today are based not
8 only on your personal experiences with CTR which you told
9 us about, but also based on the materials that you have
10 reviewed that have been supplied to you by the Debevoise
11 firm; right?
12 MR. LEITER: I'm going to object it's
13 mischaracterizing what she said. You've asked her
14 extensively about the basis for her opinions, and I don't
15 think you're accurately characterizing it in that question.
16 BY MR. GOLDSTEIN:
17 Q Okay.
18 MR. LEITER: The record is very clear for many
19 questions and answers as to what the basis of her opinions

20 are.

21 BY MR. GOLDSTEIN:

22 Q I'm just seeking to exclude -- well, I can move
23 on, but I want to make sure that it's clear that I'm not
24 missing any other investigative research that you've done
25 that you've not told me about. You've told me the
117

1 processes by which you sought out to complete your study;
2 right? Or undertake your study, never complete --

3 A Correct.

4 Q -- right? Okay.

5 I don't know the particular date of this C.V.,
6 but have you reviewed any -- or have you written any other
7 articles other than those that are contained in the C.V.?

8 A Yes, I have.

9 Q And can you briefly describe what they are?

10 A I would have to see what -- what the last
11 article is that's listed on the C.V. The two major pieces
12 of work that are not listed on that C.V. have to do with
13 understanding the transcriptional mechanism by which genes
14 are turned on in a particular tissue, and then the other
15 one has to do with identifying a gene which is involved in
16 both differentiation and in cell division which control the
17 differentiation process.

18 Q Okay.

19 Any other updates to your C.V.? I actually see
20 now this is a 1999 C.V.

21 A Yes.

22 Q Any other grants that you've received? Why
23 don't I just take a look through the whole thing?

24 A Okay. (Witness complies.)

25 I am now an associate professor.

118

1 Q How does that differ from what's stated on your
2 C.V. in 1999?

3 A It means that I'm tenured.

4 Q Okay.

5 A There's maybe another \$10,000 worth of grant
6 money.

7 Q From who?

8 A One is from the North Star Foundation, and the
9 other is from the University, from UNLV.

10 Q What are those projects?

11 A Those -- those are grants. They're not
12 projects.

13 Q Oh, I'm sorry.

14 What are the grants to study?

15 A The grants are to continue our studies in
16 understanding the process of cell choices and
17 differentiation.

18 Q Who's North Star?

19 A North Star is a foundation in which money has
20 been donated actually to the university and has been
21 specifically directed to my lab to facilitate our studies
22 in understanding fat cell development.

23 Q Okay.

24 Have you ever heard any reports -- I'm
25 addressing this not as a scientist but as a consumer and as
119

1 a mother -- any reports in the media that the tobacco
2 industry has alleged to have spiked its products to create
3 a highly-addictive product to its consumers?

4 A No, I haven't.

5 Q Okay.
6 Have you ever heard that they intentionally,
7 for want of a better word, I'm going to say "tweaked," or
8 put additives into the cigarette tobacco which is toxic?
9 A No, I haven't heard that.
10 Q Okay.
11 If you were presented with a persuasive
12 scientific evidence that demonstrated to you that those
13 were, in fact, truthful, would that change your opinion as
14 to anything you've testified about?
15 MR. LEITER: I'm going to object to that question.
16 It is an incomplete hypothetical, and it calls for
17 speculation.
18 MR. GOLDSTEIN: Okay.
19 Q Go ahead.
20 A That would not change my opinion of CTR and
21 CTR's activities.
22 Q Okay.
23 Now, you -- you testified previously that CTR
24 ceased to exist in 1997; is that right?
25 A Yes, I did.
120
1 Q And how did you come to know that it met its
2 demise when it did?
3 A I don't remember specifically. I believe it
4 was a report on MPR.
5 Q Okay.
6 Any of the materials that you reviewed in
7 connection with your study confirm the date when they
8 stopped to -- to exist?
9 A The last annual report, for one. I believe I
10 actually received notification from CTR.
11 Q That it was closing its doors?
12 A Yeah. Yeah.
13 Q Okay.
14 Had the funding for CTR ceased at the end of
15 the calendar year, as far as you know, of 1997?
16 A I believe so.
17 Q Did they have an office somewhere?
18 A New York City.
19 Q Had you ever been there?
20 A No.
21 Q Now, if I understand you correctly, you
22 understand that the firm that retained you in 1998 to
23 undertake studies was acting at the behest of CTR?
24 MR. LEITER: I'm going to object. Calls for
25 speculation.
121
1 MR. GOLDSTEIN: I'm just repeating what she
2 testified to.
3 MR. LEITER: Well, then, asked and answered.
4 BY MR. GOLDSTEIN:
5 Q And I'm clarifying.
6 MR. LEITER: Same objections.
7 BY MR. GOLDSTEIN:
8 Q Okay.
9 Go ahead.
10 A What was the question?
11 Q When you first met or spoke with -- well,
12 strike that. That's compound.
13 When you met with Mr. Michaels, did he ever
14 tell you that he was representing CTR?
15 A I don't know if he specifically said, "I am

16 here representing CTR," but it was my understanding that he
17 was being retained by CTR or that he was a lawyer for
18 CTR --
19 Q Okay.
20 A -- and in the layman's sense.
21 Q And you -- you make that comment as if -- well,
22 is it possible that he said words to the effect that, you
23 know, "I work for CTR," or "My client is CTR," anything of
24 that nature?
25 MR. LEITER: I'm going to object to the form.
122
1 You're asking her whether it's possible he might have said
2 something. I can't answer that question.
3 BY MR. GOLDSTEIN:
4 Q Okay.
5 Do you recall Mr. Michaels having said, "I work
6 for CTR"?
7 A No.
8 Q Do you remember him saying words to the effect
9 that "CTR is my client"?
10 A Words to that effect, yes.
11 Q Okay.
12 And at what point in time did your compensation
13 cease coming from Debevoise -- I'll just end it at that.
14 When did you stop billing them?
15 A This year.
16 Q Now, if Mr. Michaels were to ask you to review
17 some documents or have a discussion with you -- take your
18 time -- you'd be paid for your time, but you would send it
19 to somebody else; right?
20 A Correct.
21 Q Okay. All right.
22 We went over the discussions that you had with
23 Mr. Michaels in preparation for your deposition.
24 How about those with Mr. Leiter? Have we
25 covered the subjects already?
123
1 MR. LEITER: Object. Asked and answered.
2 MR. GOLDSTEIN: No. I specifically did not ask her
3 about conversations that she had with you.
4 Q Why don't you tell me --
5 MR. LEITER: Well, you did, but the record is the
6 record.
7 MR. GOLDSTEIN: I'm sorry.
8 MR. LEITER: You can answer that.
9 THE WITNESS: Would you tell myself?
10 BY MR. GOLDSTEIN:
11 Q You can answer specifically without repeating
12 yourself.
13 What did you and Mr. Leiter discuss when you
14 were going over your proposed testimony?
15 MR. LEITER: Objection. You're assuming something
16 that's not reflected in the testimony.
17 BY MR. GOLDSTEIN:
18 Q Isn't it correct that you had a meeting with
19 Mr. Leiter prior to your deposition for purposes of
20 reviewing your deposition testimony?
21 A I don't know what the purpose was.
22 MR. LEITER: I --
23 BY MR. GOLDSTEIN:
24 Q Okay.
25 What was discussed at that meeting between you
124

1 and Mr. Leiter?
2 MR. LEITER: Just to be clear, she testified that
3 there were two meetings. Which one you asking her about?
4 She's testified about both of them, but which one are you
5 asking her about now?
6 BY MR. GOLDSTEIN:
7 Q Well, we talked about one in Las Vegas.
8 MR. LEITER: Right.
9 MR. GOLDSTEIN: I'm talking about the one that was
10 here, either yesterday or today.
11 MR. LEITER: Good. And again, asked and answered.
12 BY MR. GOLDSTEIN:
13 Q Go ahead.
14 A So the current question is: What did
15 Mr. Leiter and I talk about --
16 Q Yes.
17 A -- in our last meeting?
18 Q Right.
19 A Good. We talked about the mechanics of
20 depositions. Basically, that's -- that's what we talked
21 about. I was interested in knowing what a deposition was
22 all about, what the format would be. Were we going to be
23 videotaped? Sort of the -- just the mechanics.
24 Q Things that you'd already gone over with
25 Mr. Michaels?
125
1 A No, we don't know for sure whether or not it
2 would be videotaped, for example. We didn't know where the
3 deposition would take place.
4 Q Okay. But nothing substantive. These are just
5 issues concerning scheduling and the format of the
6 deposition itself?
7 A Correct.
8 Q Okay. All right.
9 Excuse me just one second.
10 MR. LEITER: Uh-huh.
11 MR. LEITER: Off the record for a second.
12 (A brief recess was taken.)
13 MR. GOLDSTEIN: Back on the record.
14 I'd like to propose a stipulation that we
15 relieve the court reporter of her responsibility under the
16 Code, that the transcript of this deposition shall be
17 forwarded to counsel -- oh, I did have to make one proviso,
18 and that is that I would request that you produce and
19 photocopy the copies of the transmittals and the billings
20 and the notes that were identified in the deposition that
21 have not been produced.
22 MR. LEITER: To the extent that she has retained
23 them, we will. My understanding is they're mainly just
24 transmittal letters.
25 MR. GOLDSTEIN: Okay.
126
1 MR. LEITER: But to the extent she's got them.
2 MR. GOLDSTEIN: Well, let me just establish.
3 Q You still have the notes of conversations of
4 the attorneys that you made when you met with them?
5 A I didn't take notes.
6 Q When you reviewed these various documents, you
7 took notes of them?
8 A Those notes are in the margins. They're on
9 little post-its. They are -- they're not -- they're not
10 formalized notes like this. So if you wanted my notes,
11 you'd have to take my entire wall of material.

12 MR. LEITER: Okay.
13 Well, if -- if this is something we need to
14 talk about, why don't we do the stipulation, and we can
15 talk itb it separately off the record?
16 MR. GOLDSTEIN: And also copies of the billings.
17 MR. LEITER: We can give you copies of the billings.
18 MR. GOLDSTEIN: I'd ask that when you send a copy to
19 Mr. Piuze, you also send a copy to the reporter. That way
20 we can attach it to the deposition as exhibit next in
21 order. We've agreed to relieve the court reporter of her
22 obligations that the original copy shall be forwarded upon
23 completion to Mr. Leiter.
24 She will then forward it on to the witness.
25 She may have 14 days in which to review, make any changes
127
1 and sign them under penalty of perjury. That in the event
2 that the transcript is not available or that this witness
3 is called without the 14 days' time having elapsed, that
4 you -- that Mr. Leiter has agreed to provide any changes to
5 the deposition to Mr. Piuze within 48 hours of her
6 testimony, and that if for any reason that does not occur,
7 that a copy of the deposition may be used for any purpose
8 whatsoever.
9 So stipulated?
10 MR. LEITER: So stipulated with one minor change.
11 MR. GOLDSTEIN: Sure.
12 MR. LEITER: As I reflect on it, the judge has
13 indicated we'll be given 24 hours' notice of witnesses
14 testimony, so should we get to that point, I would provide
15 any changes if we haven't been able to do it within the two
16 week' proviso 24 hours before her testimony when we -- when
17 we know that it's 24 hours before she'll testify.
18 MR. GOLDSTEIN: I would only say that the 24-hour or
19 48-hour proviso, my understanding would only kick in if the
20 14-day period hasn't expired.
21 MR. LEITER: I understand. I understand.
22 MR. GOLDSTEIN: That's fine. Thank you.
23
24 (Whereupon, the deposition was
25 concluded at 2:24 P.M.)

128

1
2

3 STATE OF CALIFORNIA)
)
4 COUNTY OF LOS ANGELES)
5
6
7

8 I declare under penalty of perjury that I have
9 read the foregoing transcript. I have made any
10 corrections, additions, or deletions that I was desirous of
11 making in order to render the within transcript true and
12 correct.
13 IN WITNESS WHEREOF, I have hereunto subscribed
14 my name this day of , 2001.
15
16
17
18
19

DEBORAH KEIKO HOSHIZAKI, Ph.D.

20

21
22
23
24
25
129

1
2

3 STATE OF CALIFORNIA)

)

4 COUNTY OF LOS ANGELES)

5

6 I, DONNA J. RUDOLPH, CSR NO. 9652, do hereby
7 certify:

8 That, prior to being examined, the witness
9 named in the foregoing deposition was by me duly sworn to
10 testify the truth, the whole truth, and nothing but the
11 truth;

12 That said deposition was taken down by me in
13 shorthand at the time and place therein set forth and
14 thereafter transcribed by computer under my direction and
15 supervision, and I hereby certify the foregoing transcript
16 is a true and correct transcript of my shorthand notes so
17 taken.

18 I further certify that I am neither counsel for
19 nor related to any party to said action nor in any way
20 interested in the outcome thereof.

21 IN WITNESS WHEREOF, I have hereunto subscribed
22 my name this 14th day of March, 2001.

23
24

DONNA J. RUDOLPH, C.S.R. 9652

25
130